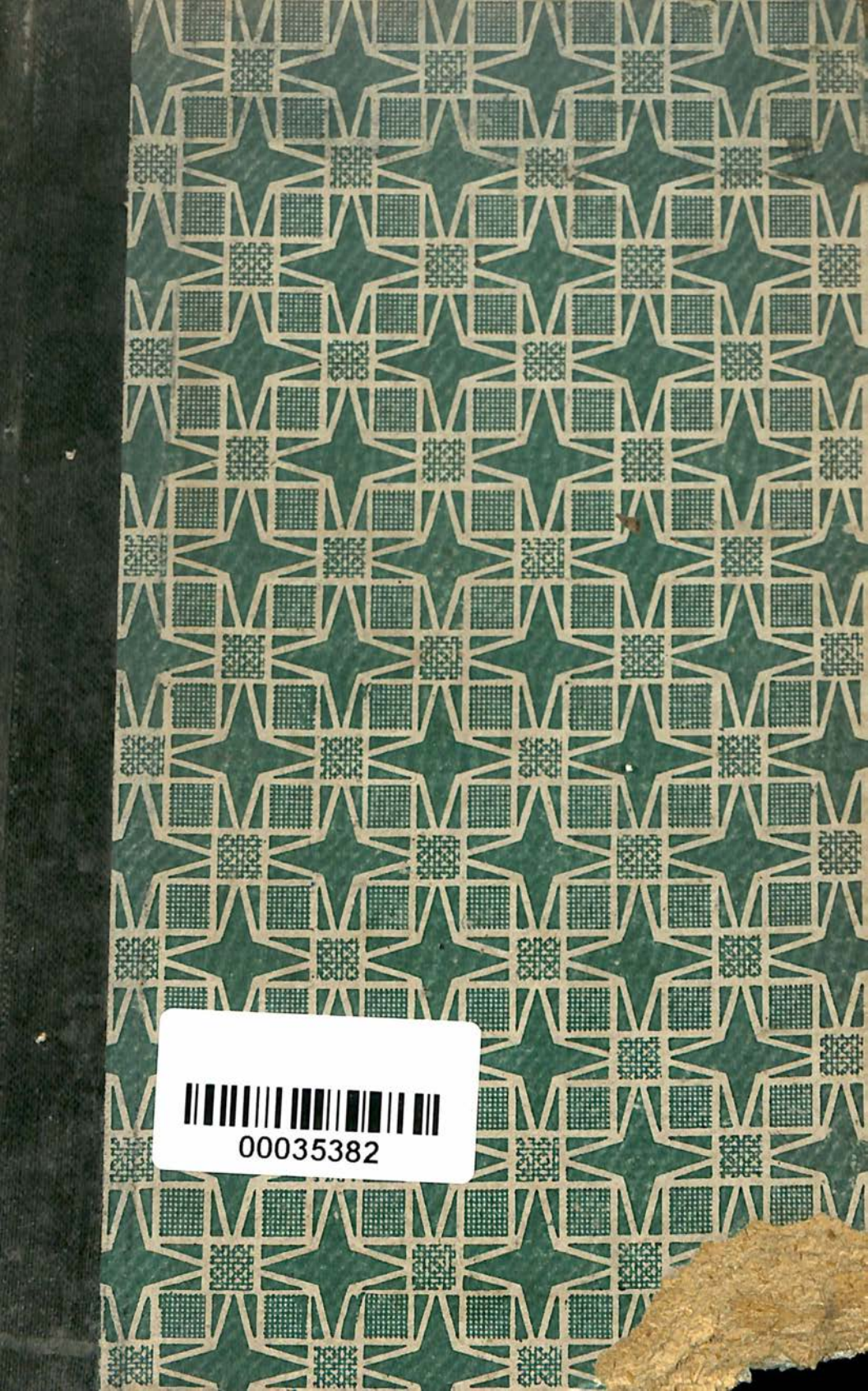
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Digitized with financial assistance from

on 28 December, 2018

Emery Walker Ph. Sc.

Duke of Wellington

From a portrait in the Hope Collection

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' ;6' & B22 D;< ' ,=AB B=' ;<' A 0' B0<2EB' BEB ' ;<' ?< ;'
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FB EB 0 ;@' < ' ;AB ' DB B ,206' U<' < ;A08' BWFB B ?B' < ' ;AB'
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1 B , UA 2B ;AB " B ?A , =E , ?B A , = < 0<< B ; ?B , 0B= V , ;B ; ;AB , ;AB ; <HNB?;2B00 ?< H , ; < ; R<H 0F< V ;A , ; ;AB C> ; , HBD , ; ;< F B00 >F< ; ;AB $; 0A DB B , 2 0?AB B0 < ; , B0> FY ; < ; < ; ;AB < B 0 EB , = , 0B?< = , ?A ;<U , = 1 , = =6 AB F<2 ; ?, 2 0 ;>, ; < : , = <; , @ 2 ; , @ ?< 0 =B , ; < 0: U,0 ;AB < D , ; D ?, >0B < ; ;AB ; > ; B2@ , ?; E ;@6 AB@ B2; ;A , ; ;AB , >;A< ;@ U,0 U , D: ;A , ; ;AB F<F>2 , ;@ A , = E , 0AB=: ;A , ; ;AB ? ; ?0 UB B = , 2@ D <U D < B EB < <>0: , = ;AB@ 0 , U ;A , ; 0>??B00 ; ;AB U , U<>2= HB ;AB < 2@ F<00 H2B U , @ <>; < ; ;AB = ?>2; B06 B ?B , ; ;AB EB @ < B ; UAB & B22 D ;< ; U,0 U ;A= , U D A 0 A , 2 0; , EB= , @ < ; ;AB , D>0: , = FB , ?A D ; 2B; ;B 0 < ; 0; D D < @ ;AB ?< =>?; < ; ;AB C> ; , 80 B = , ? <>0 ?< 00 , B0: AB U,0 HB D F B00B= ;< B0> B ;AB < B 0 EB6 <> ;2B00 , FFB , 20 UB B , =B ;< A 6 $<; A < , 2 , = , D> B ; , ; EB E ; , ; < 0 < ; ;AB 0;B 0 , ; BE 22B: , = F E , ; B B < 0; , ?B0 H@ = E =>, 20: F, 0A , = # D2 0A: UB B 0A<UB B= >F< ; A AB C> ; , BEB ; UB ; 0< , , 0 ;< < B ; A ?< , = < ; ;AB F, 0A ; <<F0 #0; B , => , : ;A<>DA ;A 0 < B E,0 M>, 2 B= H@ ;AB 0; , ;B B ; ;A , ; ;AB@ ;B =B= ;< B=>?B ;A<0B ; <<F0 ;< : B : ;AB 2, DB A , 2 < ; ;AB , @ HB D > =B < =B 0 ;< , ?A B , 0;U , = ;< % , 1 , ?A , , = N< ; ;AB < ?B < . B BD , 06 A 0 F <F<0 , 2 = = < ; ; ;AB 2B , 0; BB; & B22 D ;< 80 , < HNB?; < ; ;< B0> D , ?; EB <FB , ; < 07 E R6 ;A , ; AB ?<>2= <; ; >0; ;AB F, 0A (<EB B ; ;< BB= A 0 , @: < ; ;AB F, 0A DB B , 20 ;< ?, @ <>; U ;A F> ?; >, 2 , ??> , ?@ , @ 0?AB B < ; , N< ; ?, F, D UA ?A DA; HB 2, = HB < B A 6 B F>; ;AB , ; ;B EB @ F2, 2@ V K ; 22 ;AB BE 20 < UA ?A ; ;A ; ;A , ; A , EB B , 0< ; ;< ?< F2, , B B B= B=6 ; 22 0BB , D , R B0 B0; , H2 0AB=

K BB E<26 6 FF6 OP P6

BB 1 () ' #%(' E6 P : < , , ,??<> ; < , ; B E BU U ;A ;AB 1 , M> 0 < 1 , 2 , 0F , , = %< = 1 , ?=> : UA< A , = ?< B ; < $, = , N<R ; < , B FB 0< , 2 BF B0B ; , ; < : U2 ?2 & B22 D ;< > ?A B0B ; B=6 -

J' ; 7 0>FF2@' < ' ;AB' ; <<F0:' , =' ,' WW D>2, ' 0@0;B ' ,=<F;B=' < ' BBF D';AB ' 22B=7 ; 22' ' 0;E' , ' , @' >F< ' UA<0B'BWB ; < 0' ' ?, ' =BFB =:' ?< , =B=' H@' < ?B 0' ?, F, H2B' , =' U 22 D' ;<' ?, @' ;<' BWB?>; < ' ;AB'<NWB ,; < 0' UA ?A' A, EB' HBB ' F2, B=' H@' >;>, 2' ,D BB B ;:' ' ?, <;' B ;B ' >F< ' , @' 0@0;B ' < ' ?< <NNB ,; < ' U ;A' ;AB' F, 0A' , B 0 A 0' 0;,;B B ;' U,0' < ' F>H2 ?,; < ' G ' F E,;B' ?< B0F< =B ?B' U ;A' A 0' H <;AB :' ;AB' , H,00,=< ' ,;' BE 22B:' AB' ,==B=' 0; 22' < B' ?<DB ;' BN>0< 0' < ' =B?2 D' ;<' ;, B' ;AB' B2=' U ;A' 8B BD,0' < ' #D> ,6' B' A,=' U ; B00B=' U ;A' A 0' <U ' B@B0' ;AB' F, ?' < ' +< ;,D<80 = E 0 < ' < ' ;AB' DA;' HB < B' ,2,EB ,:' K' UAB ' UA<2B' ?< F0' ;A BU' ,U,@' ;AB ' , 0' , =' , ' < ' ' @' F B0B ?B:' UA 2B' B ;AB ' ,;;,? B=' < ' ;2 Z,;B B=' U ;A' ,;;,? :' H>;' DA;B B=' I ' HB2 BEBJ' H@' ;AB ' <U ' B'8 G AB' A,=' 0BB ' 2H M B ?F B80' ?,E,2 @:' ;AB' =,@' , ;B ' ;AB' ?< H,;' < ' R< ' H 0F<:' 2> D' ' BEB @'E 22,DB' < ' ;UB ;@' 2B0' <> =:' , =' K A,=' AB, =' F, 0A' < ?B 0' ;B22 D' < ' B;BB ' < ' ;UB ;@' ,?; < 0' < ' ;AB' 0NW B' =B0? F; < ' ,0' ;A,;' < ' R<H 0F<:' , ' ,??<> ;' < ' UA ?A' I ' HB2 BEBJ' A,0' BEB ' HBB ' F>H2 0AB=68' AB' , @' < ' #0; B ,=> ,' ?< 0 0;B=:' AB' ?< ?2>=B=:' K' < ' ; <<F0' H@' <' B, 0' ;<' HB' =BFB =B=' >F< 8 V < ' BEB @' D <> =:' ;AB B < B:' AB' <>DA;' ;<' ,E< =' K' 0 D' ;AB' 9 D80' , @' ,D, ' ' 0>?A' ?< F, @ AB B' U,0' <' DB;; D' <EB ' ;A 0' > =, B ;,2' <HNB?; < ' < ' & B22 D;< 80:' , =' A 0' H <;AB :' ;AB B < B:' U,0' F2,?B=' ' ,' EB @' > ?< < ;,H2B' F<0 ; < 6' * > D' ,22' A 0' BD<; ,; < 0' U ;A' ;AB' B ; ,2' C> ;,:' %< =' & B22BO2B@80' ;,0 ' =BB=' U,0' ,' <0;' Y E = <>0' < B6' B' A,=' HBB ' = B?;B=' H@' A 0' D<EB B ;' ;<' F < B00' , ' B, B0;' =B0 B' ;<' , =' ;AB' F, , =0' ' H D D' ;AB' U, ' ;<' ,' 0>??B00 >2' ?< ??>0 < :' , =' ;<' F2B=DB' ;AB' , =' < ' (B,;' $;, :' @B;' AB' U,0' < ?B=' ;<' B >0B'BEB @' =B ;B' F <F<0,2' ,=B' ;<' A ' H@' ;AB' C> ;,6' ' ;AB' <;AB ' A, =:' ;AB B' EB B' ?2,>0B0' ' A 0' 0; >?; < 0' UA ?A' F < < B=' ;AB' <0;' <FB 2[' = 0F2,@B=' 0>0F ? < ' , =' B0B ; B ;:' EAB ' AB' ;<>?AB=' >F< ' ;AB ' ' A 0' ?< EB 0,; < 0' E;A' 1 , ; ' =B' (, ,@' , =' ;AB' <;AB ' F, 0A' 0;B 06' >?A' EB B' ;AB' F <F<0,2' ;<' F2,?B' ;AB' A<2B' F, 0A' , @' > =B ' ,' $; 0A' ?< , =B ' I 6' B6' & B22 D;< J:' ;AB' ,;;B F;

T & B22 D;< ' ;<' . B22BO2B@:' ?;6' ' G 1 () ' #%(4' E6' 6' "< ' 0; < DB ' 2, D>,DB' ,H<>;' ;AB' ,0A' <22@' < ' F, 0A' DB B ,20:' 0BB' & B22 D;< ' ;<' $B B0 < =:' H =:' 456

& B22 D;< ' ;<' "B22BO2B@:' >D6' O:' < ' 1 B =,6

, @ , B0 < B < ;AB F2<;;B 0 2B=: <;AB 0 UB B , B0;B=6 " < ;AB 2,0;;U< =,@0: U ;B0 & B22B02B@ ;< A 0 H <;AB : A,EB HBB B F2<@B= B =B,E<> D ;< 0,EB ;AB B? 0 < ;AB0B ?, ; 0 < ;AB N>0;; > @ , = = D , ; < < ;AB]JB<F2B , = 0<2= B @: , = A,EB 0>??BB=B=6 BD>2, F2<;U,0 < B= ;< 0B RB I, = HB2 BEB ;< # ;AB ,226 $>;; ?<>2= <;0> B 0>?A<>; ,DB0 > =B @ <0B: 0< ;B B B= , = 0 EB= ;AB ?> 0 < ;AB <FB6 AB@ UB B ,22 D 8,; ;>=B H # : X & B22B02B@ U 0 < 2 B B= , = B >0B= ;AB =B < ;AB (<2=B " 2BB?B BW;; < DS: H>;; <U ;A,;;AB@ ;A ;AB 0B2EB0 0B?> B ;AB@ A,EB HBD> ;< ?AB,;; B ,D, 8 68

1 >?A ,0 BEB @ F,; <;; 0A<>2= =BF B?,;B ;AB B F2<@ B ;; < :)(. %' " UA 2B , < B D U, 0 < A, =: ;AB B U,0 >?A ;< BW?>0B ;AB ?< =>?;; < ;AB B B B0 < ;AB C> ;,6 A,;; H<=@ U,0 <U < B ;A, , ,@B, <2=7 ;; A,= HBB < ;AB 0;; BD, =B= ;0 , 0;<F D,F: ,0 , F <E 0 < ,2 D<EB B ;; UA ?A U,0 =B0; B= ;< D EB F2,?B ;< 0< B;A D < B BD>2, , = ?< 0; ;>Y ; < ,2 UAB <??,0 < 0A<>2= 0B EB6 K < ;;BB < + >H2 ?; , B;@ 8 UA ?A , 20 ;< F B0B EB ;AB 0;,;B 0;, =0 0B2 ?< =B B=: , = ;AB A 0;< @ < ;AB B ; ,2 C> ;, A,= HBB < B B?< = < ?< 0 0;B ;; = 0,0;B 6 H<=@ < <EB ;A ;@ FB 0< 0 0 ;<< A>DB < , 0; @: ;<< 0 ,22 < , BF B0B ;,; EB ,00B H2@6 #EB @ ;B22 DB ;; F,2=, =: UA,;BEB A 0 F<2 ; ?0: U,0 =B0 <>0 < 0BB D ;; D EB F2,?B ;< , BD>2, D<EB B ;6 AB < 0B E,; EB0 , = H> B,>? ,;0 U<>2= A,EB HBB ?< ;B ;B= ;; A,= ,FF< ;B= , 22BDB ?@ < < > < EB FB 0< 0: , = ;AB , H= ?,;B=6 AB % HB ,20 =B , =B= ;A,;; ;0A<>2= 0> < ;AB ,; < ,2 < ;B0: , = 2B,EB ;< ;A,;; H<=@ ;AB ? B,; < < , BWB?>; EB6 +, FA2B;0 UB B 0A<UB B= H@ =<RB 0 < ;AB F B00 V <U < B < 2B00 BB: < ; AB 0;; B F, 0A A 0;< @ V ;< ,=E<?,;B < B < < ;<;AB < ; AB0B ?< >80B06 AB C> ;,: A<UBEB : A,= < ;B ; < < 0> B =B D ;0 F<UB : UA,;BEB F B;B ?B < = 0 ;B B0;B= B00 ;; DA;; ,00> B , = F <?2, 6 ;0 0;; ,;;B F;0 ;< F>;; < ;AB BE 2 =,@ UAB ;; >0;;@ B2= ;< F>H2 ?; <F < UB 8B DB <>02@ ,H0> =6 ;; 00>B=: ,0 B, 2@ ,0 1 ,@ : , F <?2, ,; < , ? <U2B=D D ;AB ,=E 0,H 2 ;@ < 0> < D , < ;B0: , = ;AB E ;B= ,22 UB22Y ;A D F, , =0 ;< 0B = 0?AB B0 , = 0>DDB0; < 0 => D ;AB

8 & B22B02B@ ;< & B22 D;< : BF;6 5: 56 & B22 D;< : 9:))3% % ' ;; 1 () ' #%(E 6 4 6

% & " ' O) N' % ! $ '

. #) ') ' # #) ' +) ' * ') (' #' ' 1 1 # ') *'
' ' 1) ' "' 56 #' # (#' "' (#) ' $# (')

W' ;AB' 0F D' < ' 5' ;AB' ;AB , ; B0' < ' <FB , ; < 0' < ' ;AB' ;U<'
" B ?A' , @ ?< F0' B ; >0;B=' U ;2 ' ;AB' B=>?; < ' < ' , D< ' , ='
< ' , ; , 2< ,' UB B' 0; 22' = E =B=' H@' ,' H <, =' HB2;' < ' ;B ;< @'
UA ?A' U, 0' ' ;AB' A, =0' < ' ;AB' F, , =0:' , <> =' ;AB' < ; B00B0'
< ' %B =, :' 1 BM> B R, :' , =' < ;<0, 6' 2@' < ?B' A, =' ?< Y
> ?, ; < ' HBB ' < JB B=' HB;UBB ' >?AB;' , =' ;6' B 8 , =' ;AB '
;AB' < ?B' UA ?A' A, =' ? <00B=' < ' , D< ' ;<' , ; , 2< ,' <> ='
;0B2 ' > , H2B' ;<' B;> 6' AB' < 2@' U, @' < ' DB; ; D' ,' = 0F, ;?A'
< ' , , D<00, ' ;<' $, ?B2< ,' U, 0' ;<' 0B =' ;' H@' ;AB' ? ?> ;<>0'
<, =' ;A <>DA' " , ?B6' < <FB , ; < ' HB;UBB ' ;AB' =' , =' ;AB'
4;A' < F0' U<>2=' A, EB' HBB ' = ?>2;' ' , @' ?, 0B7 H>;' 0 ?B' B, ?A'
< ' ;AB' ;U<' ?< F0 ?< , =B 0' U, 0' ;B B0;B=' ' A 0' <U ' F <H2B 0'
, 2< B:' , =' <> =' ;AB ' , 22 , H0< H D:' ;AB' U, ' ' , ; , 2< ,' , ='
;AB' U, ' ' , D< ' UB ;' < ' => D' 5' , =' ;AB' 0;' A, 2 ' < '
' , 0' 0BF, , ;B' , , 0' < ' ;AB' " B ?A' NN< ;' < ' E BU6' ;' U, 0'
<;AB U 0B' U ;A' ;AB' , , =0G $2, B' A, =' HBB ' F2, ?B=' ' ?< Y
, =' < ' ;AB' UA<2B' < ' ;AB' 33 ' ;AB' ;A BB' F <E ?B0' < '
. , 2B ? , :' , D< :' , =' , ; , 2< ,' UA ?A' A, =' < B=' ;AB' , ? B ;'
D=< ' < ' , D< ' A' B' A, =' >?AB;' < ' A 0' 2B ;' , =' ;6' @ '
< ' A 0' DA;' :' U, 0' BM>, 22@' ;B B0;B=' ' ;AB' <FB , ; < 0' < ' B, ?A:'
, =' DA;' :' 0<' , ' , 0' ;AB' >2B0' < ' 0; , ;BD@' D<:' A, EB' ;> B=' A 0'
, ' < ?B' , D, 0;' UA ?ABEB ' < ' ;AB' ;U<' AB' DA;' F2B, 0B:'
2B, E D' ,' ?< F, , ; EB2@' 0 , 22' < ?B' ;<' K ?< ; , 8' ;AB' <;AB 6'
' < ;> , ;B2@' AB' F <EB=' > , H2B' ;<' , B' AB, =' , D, 0;' B ;AB '
< ' A 0' , =EB 0, B0G' & B' A, EB' , 2 B, =@' 0BB ' A<U:' ' ;AB' B, 2@'
0> B :' AB' ;A BU' A 0B2 ' >F< ' >?AB;:' , =' U, 0' HB, ;B ' < ' , ;'
1 , ,' , =' <>;B=' , ;' $B2?A ;B6' ' ;AB' 2, ;B ' < ;A0' < ' ;AB'
@B, ' ;' U, 0' , 2@' U ;A' ;6' @ ' ;A, ;' AB' A, =' ;<' =B, 2:' , =' A 0

' , ; , 2< ,' A, =' HBB ' , ==B=' ;<' A 0' ?< , =' , ;B ' B= D' = B=' < '
U<> =0' B?B EB=' , ;' ;AB' H, ; ;2B' < ' . , 206

. #) ')' # #)' +) X)

B < ;0' UB B' BM>,22@' > 0>??B00 >26' ;' U<>2=' 0BB ' ;A,;' AB' <> =' ;' EB @' = ?>2;' ;<' ?< ?B ; ,;B' , @' F BF< =B , ;' F< ; < ' < ' A 0' ; <<F0' < ' ,' H2<U' ;<' B ;AB ' 0 =B6' EB @' BU' H,;;,2 < 0' < ' ,;,2< ,' ,??< F, B=' A 0' .,2B ?, 0', =' ,D< B0B' ;<' 1 , ,6 EB @' BU' .,2B ?, 0' UB B' H <>DA;' >F' ;<' , =' ;AB' ,;,2, 0' ' ;AB' <FB ,; < 0',H<>;' (B < ,6' AB' F <H2B 0' < ' <<=' , =' ; , 0Y F< ;' A,=' 0< B;A D' ;<' =<' U ;A' ;A 0:' H>;' ;AB' , ' = ?>2;@' U,0' ;A,;' ;AB', B0' < ' H<;A' F <E ?B0:' < B' B0FB? ,22@' ;AB' ,;,2, 0:' UB B' B00B ; ,22@' 2<?,2' 2BE B0:' , =' = 02 B=' HB D' = ,U ' , ' < ' ;AB ' A< B06' AB B' U,0' ,2U,@0' 0< B' ;A B,;B D' =, DB ' ' ;AB ' <U ' = 0; ?;' UA ?A' ,=B' ;AB ' 2<,;A' ;<' 2B,EB' ;' > D>, =B=:' UA 2B' ;AB@' UB B' ;, B ' < ' < ' 0< B' = 0;, ;' BWFB= ; < 6' AB' ?< F2, ;0' , =' , D> B ;0' < ' ;AB' C> ;,0:' ;AB' , B0;' > Y U 22 D B00' < ' ;AB' < ?B B' , =' B :' B;;B B=' ;AB' A, =0' < ' ;AB' ?< , =B ?A B :' UAB BEB ' AB' 0; <EB' ;<' ,??< F2 0A' ,' DB B ,2' ?< ?B ; ,; < 6' B ?B' ;' ?, B' ;<' F,00' ;A,;' < ' ;AB' <0;' F, ;' ;6' @ ' U,0' <FF<0B=' H@' ,;,2, ' ; <<F0' < 2@:' >?A?;' H@' .,2B Y ?, 0', =' ,D< B0B' < 2@:' => D' ;AB' ?, F, D 0' < ' 56

AB' ;,0 0' < ' ;AB' ?< , =B ' < ' ;AB' =' < F0' ' ;AB' < ;A0' ;A,;' <22<UB=' A 0' E ?;< B0' <EB ' $2, B' UB B' H<;A' 2B00' ;B B0; 0 ' , =' 2B00' F< ;, ;' ;A, ' ;A<0B' F<0B=' >F< ' A 0' ?<22B,D>B' ' ,;,2< ,6' AB@' UB B' A<UBEB ' 2,H< <>0' B <>DA' 7' , ;B ' A,E D' = EB ' ;AB' F, 0A' BD>2, ' , B0' <>;' < ' ,D< :' >?AB;' A,=' <U' ;<' ;, B' ;AB' ?<> ; @ 0 =B6' "< ' BEB ' , ;B ' $B2?A ;B' AB' AB2=' 2 ;;2B' < B' ;A, ' ;AB' ';<U 0' < ' , ,D<00,' , =' C,?,:' , =' ;AB' D <> =' < ' UA ?A' A 0' ?, F0' UB B' F ;?AB=' < ' =,@' ;<' =,@6' & AB ' AB' A,=' ?< ?B ; ,;B=' A 0' ?< F0' ;<' DA;' $2, B:' ;AB' B0;' < ' ;AB' F <E ?B' A,=' 02 FFB=' <>;' < ' A 0' A, =06' ;0' B?< M>B0;' U,0' ,' ;B= <>0' ,;;B :' BEB ' ;A<>DA' AB' A,=' < 2@' ;<' ?< ;B =' U ;A' 0?,;;B B=' H, =0' < ' FB,0, ;0:' 0; B B=' H@' 0; ,DD2B 0' < ' ;AB', @' ;A,;' A,=' = 0FB 0B=' , ;B ' $B2?A ;B6' AB' F2, ' < ' ;AB' #H <:' UA ?A' < 0' ;AB' ?B ; ,2' 0; F' < ' ,D< :' U,0' B,0 2@' 0>H=>B=:' H>;' ;AB' <> ;, 0' ;<' ;AB' < ;A' , =' 0<>;A' UB B' UB22' ;;B=' ;<' HB' ;AB' B >DB' < ' 0> DB ;06' AB' ,D< B0B:' ,2< D' U ;A' ;AB' (,2 ? , 0:' UB B' ;AB' 0;' < ' ;AB' F, , =0' ;<' ;, B' ;<' 0@0;B ,;?' D>B 22,' U, , B6' ' = 0 ,@B=' H@' ;AB' ,;B' < ' $2, B80' , @:' ;AB@' A,=' B0<2EB=' ;<' =B B =' ;AB 0B2EB0' ;<' ;AB' 2,0;6' AB B' U0,0' < B' ;A, ' < B' <?>0' < ' B0 0;, ?B6' ,' ?<2< B2' B <E,2B0:' UA<' A,=' HBB ' < B' < ' ;AB' =B B =B 0' < ' , ,D<00,:' , =' A,=' B0?,FB=' , ;B

S ' # 8 . 9) ( )

;AB ?,F ;>2,; < : U,0 ,; ;AB AB,= < ;AB H< =0 < ;AB < ;AY UB0;B <> ;, 0: ;AB E,2B < < ?,2 , = < ;AB H< =B 0 <) ,E, 6 ;AB < ;A B,0;B BD < : ,H<>;' ;AB >FFB U,;B 0 < ;AB ?,' , = ;AB A 220 HB@< = C,?,: ;U<' 2<?,2 ?A B 0 , B= +B B ,' , = , ,0N BF;' ;AB U, ' < <<;:' DB;; D ;AB 0;< B0 , = , > ; < ' < ;AB ,;,2, 0 < ;AB 0 =B < ' %? =,: ' , B ; B2@ = 0; ?;' F, ;' < ';AB F <E ?B:' 0<>;A' < ;AB #H <:' 2,@ (,@, , = . 22,?, NN,: UA<0B ?B ; B0 < ,?; E ;@ UB B * , <?,' , = 1 <2 ,: <> ;, ;<U 0 < UA ?A ;AB@ UB B < ;B = 8 EB >F ;< ;A,;' ?B ; 2 D, D2 < < ,22 ;AB , DB0 < F, : ;AB B ,' =B 2H, ,? : < UA ?A =B0?B = = EB D D = B?; < 0 ;AB 0<> ?B0 < ;AB ,D>0: ;AB (>,=,2,E , : , = ;AB / >?, 6 $<;A (,@, , = . 22,?, F,' UB ?' < ?B 0 < ;AB BD>2, , @:' A<2= D ?< 00 < 0 > =B $2, BG ;AB H, = < ;AB < B A,= ,0 ;0 >??B>0 ;AB BD B ;' < '%,' + ?B0,: UA<0B BW; ,< = , @ B0?,FB ,? <00 < ;AB F, , ;B ;AB ?< H,;' < , ;, =B A,0 HBB ;<2= ' , <;AB F2,?B %

>?AB;80 U< : => D ;AB 2,;B 0> B ' , = ;AB ,>;> < '

5:' U,0 ;< H B, ' >F , = ,0 , ' ,0 N <00 H2?' ;< =B0; <@ ;AB0B 2 , =06 0 0>??B00 U,0 ?< 0 =B ,H2B H>;' <;' ?< F2B;BG C>2@ AB 0;< B= (,@, 80 0; < DA<2=: ;AB <> ;, 0, ?;>, @ <) >B0; ,' < < ,' =B2 D> 2,: ?,SJ;> B= A 0 ,D,R B0: , = = <EB A >F ;<T ;AB <> ;, 0 < 2<2 ,6 < ; > D A 0 ?, Y F, D 0<>;A' < ;AB #H <:' AB 0B ;' ;AB +<2B A2<F 0 ' ,D, 0;' . 22,?, F,: > ' ,H, =< B= ,2,;,@>=:' * , <?,: , = ;AB <;AB A 22 ;<U 0: , = B; B= ;< ;AB B ,' =B 2H, ,? : UAB B AB ;<< B >DB , ;' ;AB B <;B ?< EB ;' < '#2 B B =,2:' < B < ;AB <0;' <>; < ;AB U,@ 0F<;0 ' ;AB UA<2B +B 0>2,6 B B:' BEB ;AB2B00:' ;AB F, ;0, U,0 <22<UB= >F <) <E6 O H@ ,' ?<2> > =B <2< B2 B <;:' UA<' , <B>E B= A <>;' < A 0 F<0 ; < : 0> F 0B= A H@ ,' DA;' ,;;,? : , = = <EB A <EB ;AB . ,2? ? , H< =B 6 AB ?< EB ;' U,0 H2<U >F:' ;AB =BFB =B ;' E 22,DB < D>B2,' 0,? B=:' , = ;AB " B ?A U ;AY = BU 6

8 BB E<26 6 F6 _6

" < , BW?B22B ;' FB 0< ,2 = , @ < ,22 ;AB0B <FB ,; < 0 0BB (B B ,2 . < $, =;80 $ % % <%=% FF6 6 B ,??>0B0 >?AB;' < D <002@ BW,DDB ,; D: H<;A' A 0 = 0F,;?AB0 , = A 0 B < 0: ;AB= ?>2;@ , = F< ;, ?B < ;AB0B <> ;, , =0 I0BB >?AB;80 % '9;' 6 FF6 O

AB0B <FB , ; < 0 A , = HBB ? , B= <>; H@ 1 >0 B 8 = E 0 < H>; B , UA 2B <EB B ;0 < , EB @ 0 2 , 0< ; UB B HB D > =B ; , B H@ , <;AB = E 0 < : ;A , ; < % , E , 2: < ; AB <;AB 0 =B < , D< : , 2< D ;AB 02<FB0 , = D< DB0 < ;AB +@ B BB0 A ;AB B = < >D>0; , ?<2> < : B 0;< B= ;AB ?< EB ; < , C> , =B 2 , +B , : ??<0B ;< C , ? , : UA ?A , , 0 , , = B <E , 2B0 UB B U< ; ; < , B ;AB AB , = M> , ;B 0 ; U , 0 , , ? B ; H> 2= D ?< ; , D ;AB ;< H0 < ;AB B , 2@ D0 < , D< : UA< B D B= ;AB <> ; , 0 HB < B , , D<00 , A , = HBB B?<EB B= < ;AB 1 << 7 ; A , = BEB 0BB , B B @ < B DA; A> = B= @B , 0: , = U , 0 BF>; B= A<2@ , = F BD , H2B B ?B ; 0 ? , F ;> B =B , 2; , 0BEB B H2<U ; < ;AB ?< =B ?B < ;AB 0> DB ; 0 B <E , 2B0: A<UBEB : AB2= <>; ;AB UB0; B >F2 , =: ?< ; > D ; < =B B = A 0B2 ;AB E , 22B@ < < ? , 2: ; 22 AB U , 0 HB0B; < , 22 0 =B0: < >?AB; A , = <H; , B= 2B , EB < + , 0 ; < ? , 22 >F ;AB) , ; < , 2 (> , =0 < ;AB BDB: $, 00B0 +@ B BB0 , = , > ; B (, < B: , = ;AB # ' 333 . %3 '% , ; ; , ? B= ;AB Y 0> DB ; 0 ;AB B , < , ? <00 ;AB A DA <> ; , 0: UA 2B ; AB = < F0 , = E , ?B= , D , 0; ;AB < < ;AB < ; 6 ; B >?A 0? , ; ; B B= DA; D B <E , 2B0 ? , F ; >2 , ; B=: < ?< = ; < ;A , ; AB 0A<>2= HB , 22<UB= , BB =BF , ;> B6 B B; B= ; < , ; , 2< , U ; A 0< B < A 0 B G ;AB B0; = 0FB 0B= < ;AB < B ; : H>; < 2@ ; < B , 00B H2B , BU UBB 0 2 , ; B : > =B , <;AB , = , < B U , @ , = <H0; , ; B ?A B : ;AB @<> DB 1 , : UA< ?< B ?B= ;A 0 0 , B , >;> ; < , B ;AB H< =B 0 < , D< , =) , E , B ;AB ;AB , ; B < A 0 A , R , =<>0 BWF2< ;06 $>; ;AB BD < U , 0 ?< F , ; EB2@ M> B; BF;B HB , = ?;<HB : , = >?AB; ; , 0 B B= ;AB , ?; E ;@ < A 0 <E , H2B ?<2> > ;AB ; < ;AB B , 0; U , =: UAB B AB = <EB 0< B) > . (<>; < ;AB E , 22B@0 < ;AB ?, , = #00B , : , = ; B= ; < <FB >F , BU 2 B <

4O: < , A DA2@ F ?;> B0M>B , , ; EBJ6 2 ? 0> DB ; 0 UB B 0; 22 > 0 22B= , 0: 0A<; EB @ F<< 2@: BF; H, = U , ; ?A: , = UB B D EB ; < F , ?6 A , ; ;AB B 0 0< B;A D ' $, =;8 ? ; ? 0 0BB 0 ; < AB 0A< E22 H@ ;AB , ?; ; A , ; ;AB UA<2B = E 0 < < 1 >0 B 2<0; HB;UBB C>2@ , = * B?6 : 5: < 2@ ;A BB < ?B 0 22B= , = B DA; U<> =B= <>; < F B0B ; U ;A ;AB B , D2B0 0 W < ;A0 < ?B00 , ; , =0 , = 0 0ABO I0BB 1 , ; B 8 ?@('% .%(' A % (' < ; B M><; B= HB < BJ6

>?AB; 8 ; A = = E 0 < : ;A , ; < , HB ; : U , 0 2@ D <>; ; AB = B?; < < ;AB ?, , = ;AB (>, = , 2>FB: U , ; ?A D 2B0; $2 , B DA; , B , BU 0 , 22@ < < ; <0 , < %B = , 6

, =' EBW, ; <>0' F<2 ?@' < ' ;B ?BF; D' ?< > ?, ; < 0' , =' ?>; ; D' >F' 0 ,22' F, ; B0' , =' 0; ,DD2B 06' AB@' UB B' >?A' A, =B ' ;<' =B, 2' U ;A:' UAB ' < ?B' ;AB@' A, =' 2B, ;' ;A, ;' <;' BEB ' ' ,0; B00B0' 2 B' # 2' B B =, 2' < ' , ' C>, ' =B' 2, ' +B , ' U, 0' ;' U 0B' ;<' < B ' ;AB' " B ?A' H, ; ;2B6' ' 2B00' >?AB;' 2B ;' , ' D, 0< ' ' BEB @' ;<U :' , @:' ' BEB @' ?< 0 =B , H2B' E 22, DB:' < ' ;AB' 0 B , 0:' ;AB' 0 DB ;0' =< , ;B=' ;AB' UA<2B' BD < 6' ' AB' = =' ; , B' 0>?A' B, 0> B0' < ' A<2= D' =<U ' ;AB' >F2, =:' AB' U, 0' < ?B=' ;<' Y <H 2 RB' , ' EB @' 2, DB' F <F< ; < ' < ' A 0' , @6' & B' 0A, 22' <;B' ;A, ;' ' ' AB' U, 0' < 2@' , H2B' ;<' = , U' <>;' : ' < ' A 0' P: ' B ' < ' ;AB' E, 0 < ' < ' & B0; B ' , ; , 2< , 6

& A 2B' ;AB' ?< , =B ' < ' ;AB' =' < F0' U, 0' , D' 0; B, =@' F <D B00' U ;A' ;AB' ?< M>B0;' < ' , D< :' ;AB' < ;> B0' < ' A 0' ?<22B, D>B' < ' ;AB' 4; A' < F0' A, =' HBB ' , ' < B' ?ABM>B B=6' =BB=' < ' ;AB' D B, ;B ' F, ;' < ' 5' ;6' @ ' U, 0' H <>DA;' ;<' , ' ?< F2B; B' 0; , =0; 22' H@' ;AB' > BWFB?; B=' <H0; , ?@' < ' ;AB' D, 22, ;' D, 0< ' < ' (B < , :' UA<' < ' <' 2B00' ;A, ' B DA;' < ;A0' BF;' ;AB' , ' H<=@' < ' ;AB' , @' < ' , ; , 2< , ' =B; , B=' ' < ;' < ' ;AB ' U, 2206

& AB ' 2, 0;' UB' =B, 2;' U ;A' ;AB' <FB , ; < 0' ' ;A 0' BD < ' UB' 2B ;' ;6' @ ' E ?; < <>0' , ;' ;AB' UB22 ?< ;B0; B=' H, ; ;2B' < ' . , 20:' , ;B ' UA ?A' AB' , =E, ?B=' ;<' ;AB' F2, ' < ' , , D< , :' , =B' 0< B' =B < 0; , ; < 0' , D, 0;' ;A, ;' < ; B00:' H>;' B;> B=' , ;B ' , ' BU' UBB 0' ;<' $, ?B2< , ' I 1, ?A' J' U ;A<>;' A, E D' , =B' , @' 0B <>0' , ; ;B F;' ;<' ;> ' A 0' E ?;< @' ;<' F , ?; ?, 2' , ??<> ;6' A 0' B; B, ;' , ;B ' , ' H 22, ;' 0>??B00' , @' HB' ?< F, B=' ;<' . ?;< 80' 0 2, ' BE, ?>, ; < ' < ' <>;AB ' #0; B , => , ' , ;B ' 1 B=B22 :' , =' U, 0' H <>DA;' , H<>;:' ' ;AB' , :' H@' ;AB' 0, B' ?, >0B:' U, ;' < ' 0>FF2 B06' " < ' UAB ' AB' A, =' ?< 0> B=' ;AB' B0<> ?B0' < ' ;AB' BU2@ 0>H=>B=' = 0; ?;' HB; UBB ' . , 20' , =' , , D< , :' ;6' @ ' A, =' <' B, 0' < ' F <E = D' A 0' , @' U ;A' > ;AB ' 0>H0 0; B ?B6' $, ?B2< , :' A 0' H, 0B:' ?<>2=' <;' BB=' A :' < ' ;AB' ? ;@' U, 0' ;0B2 ' < ' ;AB' B=DB' < ' , BG' ;' U, 0' 0; 22' HB0B;' ;<' < ;A' , =' UB0;' H@' ;AB' 2<?, 2' M>B2B; B0:' UA<' A, =' B; B=' ;<' ;AB ' <2=' A, > ;0' UAB ' ;AB' , ' " B ?A' , @' A, =' D< B' < ' 0<>; AU, =' < ' ;AB' ?, F, D ' < ' . , 206' ;' U, 0' 0; DB ;2@' H2<? , =B=' < ' ;AB' 0B, ' 0 =B' H@' ;AB' $; 0A' 1 B= ;B , B, ' 2BB;:' , =' ;' ?<>2=' <;' = , U' <<=' < ' " , ?B' H@' 2, =:' HB?, >0B' ;AB' A DA <, =' ;<' +B F D , ' F, 00B=' ;A <>DA' ;AB' < ; B00' < ' (B < , :' UA ?A' U, 0' 0; 22'

F, 0A A, =06 ;6 @ A 0B2 : ; U 22 HB B B HB B=: A, = < 2@ B, ?AB= $, ?B2< , H@ ; D < < < ;< 0 =B ; ,? 0 ;A <>DA ;AB <> ; , : , = U D A 0 U, @ =<U ;< ;AB 0A< B H@ ;AB A, = <>DA; H, ;; 2B < , =, =B>6 22 (B < , 0A<>2= , 22: , = ;AB D, 0< < < $, ?B2< , HB F2, ?B= = B?; ?< Y > ?, ; < U ;A " , ?B: ;AB B U, 0 2 ; ; 2B >0B , D, H ; <>0 < B 0 EB <EB B ;0 , D, 0; , , D< , < < , @ <; AB F< ; <>;AB < < B ; , 2 , ; , 2< , 6 ; U, 0 , H0<2>; B2@ B?B00, @ ;< B=>?B (B < , : , = 0< ; < H D ;AB = E 0 < 2B ; HBA = > =B $6? 22B: ;AB F> =, , , = < ;AB < ; B < <>060 22< : ;< BB ?< > ?, ; < U ;A ;AB B , =B < ;AB 4; A < F06 " < ;AB < B ; UAB ;6 @ F, 00B= ;AB <> ; , 0 => D ;AB U ;B B 22B A, = HBB DA; D<>; , FB; ; @ ?, F, D , D, 0; ;AB < ;AB , ; , 2, 0: UA ?A A, = < ?< BW < UA, ; BEB U ;A A 0 0>FB < 80 <FB , ; < 0 , ; 1 <2 0 =?: ?@ , = . , 220: , = A, = 2 ; ; 2B =B ;B B0>2; < , @ =6

) < < B 0, U < B ??2B, 2@ ;A,) , F<2B< ;AB BB= < ;AB B=>?; < < < (B < , G , 0 B, 2@ , 0 C, >, @ AB A, = 00>B= < =B 0 H<; A ; < ;6 @ , = ; < B 22B ; < F BF, B < ; AB B ;B F 0B6 $>; ;6 @ U, 0 <U <>; < ; <>?A: , = B 22B U, 0 , ; <<: UB, ; ;AB B, 2@ 0F D ; < = B, < < , @ 0>?A , , =EB ;> BG AB A, = HBB 2B ; < < B; A, 0BEB =BF2B; B= H, ; ; , 2 < 0 ; < , ; , A 0 A<2= <) >9 AB , ; , 2< , : UAB ;6 @ ; << ;AB B0; < ;AB , @ , ? <00 ;AB A 220 ; < $, ?B2< , 6 AB # FB < U, 0 <; 02<U ; < B, 2 RB ; A, ; ;AB 4; A < F0 >0; HB B < ?B= < , 2, DB 0?, 2B6 B = = 0< H@ 0B = D ; A ; AB ; ;AB 0F D < 5 , H D, = B < $B D ; <<F0 I <> H, ; ; , 2 < 0J: ;AB 8BD B ; < & > RH> D I; U< H, ; ; , 2 < 0J: , = , = E 0 < I0BEB H, ; ; , 2 < 0J < & B0; FA, 2 , 0 G ; U 22 HB <; B= ; A, ; <U: , 0 , 2U, @0: AB U, 0 <0; ?A, @ < = , ; D , ; EB " B ?A ; <<F0 ; < , ; , 2< , : , = , 2U, @0 B= ;AB U, ; ;A, ; = B?; < U ;A , >W 2 , B0 UA<0B , ; B AB U, 0 2 ; ; 2B ; B B0; B= G ; AB ?, F, D B, 0; B F, U, 0: , ; B , 22: H>; , 0 =B 00>B ; AB , 0; >DD2B & AB ; AB0B B < ?B B ; 0 A, = , EB= B 22B HBD, ; < ?<22B?; , ; B , 2 , ; $, 0?, , < < ; AB "2>E , : ; < UA ?A 0 BDB D> 0 2, H< Y <>02@ = , DDB= , ? <00 ; AB +@ B BB0 UB B , ==B=G 0BEB , 2?< F, B0 < AB, E@ , ; 22B @ , = 0, FFB 0 UB B H <>DA; >F < " , ?B6

T B;; B F< ; < =B 8#0F, D B B0; B: =8, 22B> 0: 0<2BB: B; 0, 0 2>B ?B 0> 2B B0; B =B 2, +B 0>2B6 FB , 2 1 >; B < * B?6 : 56

;6 @ B, UA2B: <> UBB 0 , ;B A 0 B; B,; < ;AB F2, < , ,D< ,: <EB= < ;< . ?A >F< F 2 : U ;A ;AB = E 0 < 0 < <>A, : + <: %B??A : , = A,H<;: 2B,E D *>AB0 B U ;A A 0 < D ,2 " B ?A = E 0 < : UA ?A A,= AB2= $, ?B2< ,' 0 ?B ;AB <>;H B, < ;AB U, : ?A, DB < A 0 H,0B < <FB ,; < 06 0 =BF, ;> B U,0 F, ;2@ =B0 D B= ;< 0F, B ;AB 0;< B0 < $, ?B2< ,: UAB B ;AB F ?A< , B U,0 HBD D ;< HB B2;7 < AB ;B =B= ;< 0>H0 0;' A 0 , @ < ;AB >F2, = F2, < . ?A: ,' ?A ?< HB, D = 0; ?;' A ;AB ;< > ;<>?AB= H@ ;AB U, 6 $>;' ,' BU =,@0 , ;B AB A,= , ?AB= < ;A $, ?B2< ,' U,0 BB= < F E,; < : H@ ;AB 2>? @ , E,2 < ,' 0M>,= < < E ?;>,22B 0 < <>2< : ?< E<@B= H@ = ,2 <0 ,<: UA ?A A,= F>;' ;< 0B,' ,' 0;< , = B2>=B= ;AB $; 0A H2<? ,= D 0M>,= < I F 2 4J6 AB F<0 ; < < . ?A: A<UBEB : A,= HBB ?A<0B H@ ;6 @ <;' < 2@ < B,0< 0 < 0>FF2@: H>;' HB?,>0B ;AB F2,?B U,0 A,FF 2@ 0 ;>,;B= < ?<EB D;AB F <NB?;B=0 BDB< (B < ,',D, 0;', @ ;B >F; < H@ $2, B6 ;AB F, 0A?< , =B ?A B H <>DA;' >F ;AB U B? 0 < ;AB <2= ,;,2, , @ < , ,D< ,: U ;A A 0 .,2B ? , 2BE B0 ,==B=: AB U<>2= ,2 <0;' ?B ;, 2@ ;, B ;AB 2, = <,= H@ 1, B0,' , = . ?A: 0 ?B ;AB ?<,0; <,= U,0 F ,?; ?,22@ H, B= ;< A H@;AB " B ?A <??>F,; < < $, ?B2< ,6 0 ,' ,;;B < , ,?;' ;AB ?< B ?B B ;' < ;AB 2B,D>B < (B < ,' U,0 <;' EBWB= H@ , @ 0>?A ;B >F; < : < $2, B A,= A 0 B@B0 WB= < , ,D<00,' 1,@ , =C> B: , = U,0 0< , < = B, D < , ,00,>2;' < ;6 @ : ;A,; AB = BU < F, ; < ;AB ,;,2, , @ < A 0 > A,FF@ E,0 < < ,D< : UA ?A 0AB= U ;A ;AB = 0,0;B < $B2?A ;B6 * > D;AB B, 2@ < ;A0 < ;A 0 2< D 0 BDB ;AB < 2@ BW;B ,2 AB2FB 0 < ;AB D, 0< < (B < ,' UB B ;AB 0 ,22 < ?B < BD>2, 0 > =B ;AB U 00 & F B : , = ;AB M>B2B;B0 < 2, <0 , = <E ,' < ;AB F> =, : B 22B8 0 <FF< B ;0 => D ;AB 0F D6 ;' , ,D< ,' ;AB 1, M> 0 < <>F D @: ;AB 0B < < ?B <U ,;,2< ,: A,= < < B ;A, P: B 2B ;' < B= D8 0 <2= , @: , = U,0 AB2F2B00 ;< ;B B B U ;A ;6 @ UA< A,= 0< B : B ?< ?B ; ,;B= ,;' . ?A6

AB F BF, ,; < 0 < ;AB 0 BDB ;AB B < B UB ;' < ' ;AB B = < F 2 , = ;AB HBD D < 1,@ U ;A<>;' , @ A = , ?B: 0,EB < ;AB < ,2 H ? B D0 < ;AB " B ?A <>;2@ D =B;,?A B ;0 U ;A ;AB 2<?,2 (% %(UA ?A BEB ?B,0B=6 <> =

. ?A , ; ;B 0 UB B F, ; ?>2, 2@ 2 EB2@: < ;AB UA<2B F<F>2, ; < < ;AB ;<U , =;AB 0 <> = D F2, 0 A,= D< B >F ;< ;AB A 220: UAB ? ;AB@ U, =B B= 0B H2@ < ;A BB < ;A0: >?A A> ;B= H@ " B ?A < ,D D F, ; B0: UA ?A ;AB@ <??, 0 < ,22@ 0>??BB=B= =B0; <@ D6 ;6 @ <FB B= >F A 0 ?< > ?, ; < 0 U ;A B 22B H@ 0B = D ;< A %B??A 8 0 ; , 2 , = E 0 < : UA ?A ?>; ;0 U,@ , = ?< 0; , ; 0 0AB0 , 2< D ;AB H, 0 < ;AB B ;< (B < , : , = B;;AB ; <<F0 < ;AB F> =, =B 8 ;0 U, 220 6 B 22B A,= <EB= < ;A > $,60?, , < 1 ,@ O: , = < ;AB B DA;A BWFB22B= ;AB F, 0A <>;F<0;0 < ,22 ;AB E 22, DB0 < = ;AB < ; B00: <; U ;A<>; 0< B 2 EB2@ 0 0A D6 B A,= H <>DA; >F 0< B : , ; @V ??>= D A 0 <U <2= = E 0 < , = ,22 ;AB BU2@ , EB= (B , 0V U ;A 0< B : , ; 22B @ B , = B D BB 06 2 <0; , ; ;AB 0, B < B ; , EB= = 0F, ;?AB0 < + , 0: , <> ? D ;A, ; ;AB # FB < : N>0; HB < B =BF, ; D < ;AB >0; , U, : A,= 0>FB 0B=B= H<;A ;6 @ , = B 22B: HB D = 0?< ;B ;B= U ;A ;AB A, =2 D < , , 0 , ; , 2< ,6 ; 0 > < ;> , ;B ;A, ; <0; , ;B B ; =B; , 2 < A 0 8B,0< 0 ,FFB, 0 ;AB 2() . % H>; ; U<>2= 0BB ;A, ; AB ;A<>DA; ;A, ; ;AB E ?;< B0 <) <2 0 =B B@ , = . , 20 0A<>2= A,EB A,= D B, ;B B0>2;0: = 0 FF <EB= < ;6 @ 8 0 B; B, ; < <; < , ,D< , : , = ;A<>DA; ;A, ; B 22B A,= 0A<U D B, ; UB, B00 =B,2 D U ;A ;AB 0> DB ;0 < ;AB F> =, 6 B D < B= ;AB 0FB? , 2 = Y ?>2; B0 < ;AB U, <2 0 <2 0 <2 0

;A , ;' . B = B ' U , 0' , FFB , 2 D' 0; , DA ;' ;<' ;2 B' # FB < :' 0;B , =' < ' ?< B0F< = D' ;A <>DA' A 0' A B , ?A ?, 2' 0>N B < :' , ??< = D' ;<' ;AB' >2B0' < ' 2 ; , @' B; M>B; ;B6' $>;' AB' 0; U' ;A , ;' . B = B ' A , =' , ' D<<=' ?, 0B:' , =' 2 B' A , =' N>0;' 2B , ;' ;A , ;' $2 , B' A , =' ;> B=' < ' , D , 0;' , D< :' 0<' ;A , ;' <' ; <>H2B' < ' ;A , ;' M> , ;B ' BB=' HB' B , B=6' ??< = D2@' AB:' EB @' D >=D D2@:' 0B ;' H , ? ' %B??A 80' = E 0 < ' ;<' (B < , 6' ;' U , 0' ;AB' U< T0;' ;A , ;' AB' F<00B00B=:' HB D' ?< F<0B=' < ' <' < B' ;A , ' <> ') B , N <2 ; ' , =' ;A BB' ; , 2 , ' H , ; ; , 2 < 0:' U ;A' , ' 0; B D;A' < ' 2 ; ;2B' <EB ' : ' H , @< B;0' A' B' , ==B=' ;<' ;' , ' BD B ;' < ' ; , 2 , ' 2 DA;' A< 0B:' 0BEB , 2' < ' A 0' <U ' H , ; ;B B0:' , =' B , 2@' , 22' ;AB' B D BB 80' , =' 0 , FFB 0' < ' A 0' ?< 8F0:' 0<' ;A , ;' ;AB' ;<; , 2' B < ?B B ;' 0B ;' ;<' \ B = B ' ?< 0 0;B=' < ' < B' ;A , ' O: ' B 6

, E D' B?B EB=' ;AB0B' 0>??<> 0:' UA ?A' H <>DA ;' >F' A 0' ;<; , 2' < ?B' ;<' O: ' , ; @' , =' ?, E , 2 @:' , =' : ' , ; 22B @ B :' 0 , FFB 0' , =' B D BB 0:' . B = B ' ?< B ?B=' < ' S1 , @' O' A 0' <FB , ; < 0' , D , 0;' (B < , 6' < ' ;A , ;' = , @' %B??A 80' = E 0 < ' ;<< ' ;0' F<0;' ' ;AB' F2 , ' < ' , 2 ;:' < ' ;AB' UB0;' < ' ;AB' ;<U :' UA 2B' ;AB' " B BA' , =' & B0;FA , 2 , ' = E 0 < 0' UB B' , 2 B , =@' ?2<0B' ;<' ;AB' F2 , ?B' < ' ;0' B , 0 ;B ' , =' < ;AB ' 0 =B06' AB' AB , =' M> , ;B 0' , =' ;AB' " B ?A' H D , =B0' < ' C<H , ' , =' (> 22<;' 2 , @' H@' , ,' , =' ;AB' H =DB' < ' 8< ; 1 , @< :' UAB B' ;AB' , D , R B0' UB B' B0; , H2 0AB=:' UA 2B' ;AB' (B , 0' A , =' HBB ' 0B ;' >F' < ' ;<' ;AB' AB DA;0' B , 0;' < ' ;AB' < ; B00' , =' AB2=' ;AB' F2 , ;B , >W' < ' , F= ,:' , ' 1 B= :' , =' *< B @6' AB' <? @' 0<>;AB ' 0 =B' < ' (B < , :' ' ;AB' = B?; < ' < ' ;AB' D< DB' < ' ;AB' A , :' U , 0' <;' @B;' F <FB 2@' EB0;B=6

< B;A D' A , 0' , 2 B , =@' HBB ' 0 , =:' ' , ' B , 2 B ' E<2> B' < ' ;A 0' U< :' ?< ?B D' ;AB' 0 ;>, ; < ' < ' (B < , :' UAB ' ;0' ;U<' B , 2 B ' 0 BDB0' H@' * >AB0 B' UB B' , , ;B= 6' ;' >0;' 0> ?B' ;<' BFB , ;' AB B' ;A , ;' ;AB' ;<U ' 0' H> 2;' < ' ;AB' 0;BBF' =<U 02<FB' < ' ;U<' 2< ;@' AB DA;0:' U ;A' ;AB' EB ' , ' , ;' ;0' << ; 6' ;AB' 0; B , ' 0' ? <00B=' H@' ;U<' H =DB0:' H>;' 0' < =, H2B' BEB @UAB B' 0 , EB' ' ; B0' < ' 0F , ;B6' $B@< =' ;' 2 B0' ;AB' 0>H> H' < ' ;AB' 1 B ?, =, 2:' 0> < =B=' H@' < ; ?, ; < 0' UA ?A' < ' , ' ;BD , 2' F , ;' < ' ;AB' =B B ?B0' < ' ;AB

T : (' H , @< B;0' , ' ;U<' 0M>, = < 0' < ' ; , 2 , ' 2 DA;' A< 0B' H@' ;AB' B;> ' < ' 1 , @' 6' AB') B , F<2 ; , 0' UB B' H , =' ; <<F0:' =B0B ; D' UAB BEB ' ;' U , 0' 0 , B' ;<' =<' 0<6

T BB' E<26' 6 FF6' 4 56'

? ;@6 AB EB B 8: ?< D < ;AB UB0;: N< 0 ;AB , , ;: ;AB < ;A 0 =B < ;AB 1 B ?, =, 2 , =U, 02 B0 ;AB BW; B B < ;AY UB0;B ?< B < ;AB U, 220 < ;AB ? ;@ F <FB 6 AB ;U<AB DA;0 >F< UA<0B 2<UB 02<FB0 (B < , 0 H> 2;, B 0BF, ,;B= < B, ?A <;AB H@ , =BBF , E B:?, 22B= ;AB (, 22 D, : =<U UA ?A > , ;B ;;B ;U, ;B ?<> 0B , = , <, =: ;AB < 2@ < B H@ UA ?A , FF <, ?A ;< ;AB ? ;@ < ;AB B, 0; 0 F<00 H2B6 AB < ;AB AB DA; 0 ? <U B=H@ ;AB 0; < D < ; < 1 < N> ?A: ;AB <0; < =, H2B F, ; < ;AB ? ;@ =B B ?B0: U ;A ;0 ;A BB <>;Y 2@ D B=<>H;0 ?, 22B= ,) , ? 0<: , %> 0 , = , * , B26 AB ? B0; < ;AB 0<>;AB AB DA; 0 ?<EB B= , 0 2, , 02 < H@ ;AB ;A BB < ;0 < ;AB , F>?A 0: `>BB B: , = ;AB < 0;, H2B: E ;A ;AB , 2E, @ B=<>H; 2<UB =<U ;AB 02<FB , H<EB ;AB (, 22 D, : , ? D , * , B2 < ;AB <;AB 0 =B < ;AB , E B6 U< <;AB 0 , 22 < ; ?, ; < 0: ;AB B=<>H;0 < ;AB K A, F;B 8 , = ;AB K ;@:8 ?<EB ;AB F, ;A EA ?A 2B, =0 =<U < ;AB < ;0 ;< (B < , 6) B ;AB ;AB 1 < N> ?A < ;AB , F>?A AB DA;0 , B 0<2, ;B= A 2207 B, ?A 0 ;AB B = < , 0F> > D =<U < ;AB A DAB <> ; , 06 $>; EA 27 ;AB 0<>;AB 0> ; 0B0 A DA , H<EB ;AB A 22@ B, ?A EA ?A N< 0 ; ;< ;AB <> ; , <) >B0; , B 2< , =B 2<0 DB2B0: ;AB < ;AB 0> ; I EAB B 2 B0 1 < N> ?AJ 0 , ; ;AB B = < , F2, ;B, > BW;B =Y D , ;< ;AB < ;A6 AB , F>?A AB DA;0: ;AB B < B: ?, < 2@ HB , ; ; , ? B= >FA 22: UA 2B 1 < N> ?A ?, HB , 00, 2B= < D <> = < , 2BEB2 2 ; ;2B B < ;< ;0B2 6 $>; BW?BF; < ;A 0 F< ; H<;A AB DA;0 , B EB @ 0; < D: ;AB 02<FB0 HB D , @ F2, ?B0 , H0<2>;B2@ F B? F ;<>0: B0FB? , 22@ ;<U, =0 ;AB (, 22 D, : , = BEB @UAB B 0;BBF6) BEB ;AB2B00 ;AB B , B U = D F, ;A0 2B, = D >F H<;A: < , , , = "< ; 1 , @< ; AB ?, 0B < 1 < N> ?A: < , 0, =B B2E, , = <;AB E 22, DB0 ;<U, =0 ;AB B, 0; , = ;AB 0B, ;AB ?, 0B < ;AB , F>?A AB DA;06 22 ;AB DM8<> = 0 H, B <? : E ;A < 0>FB ?> HB ; 0< 26

22 ;AB < ; ?, ; < 0 EB B 0< BUA, ; , ; M>, ;B= ;@FB: <;A D A, E D HBB =< B ;< <=B RB ;AB =B B ?B0 0 ?B ;AB U, < ;AB F, 0A >??B00 < A "B = , = . , = A, 2B0 A, = BD2B?;B= (B < , , E<> < ;AB BU < = B00 < " D>B , 0: B, B ; < ;AB < ; B : < UA ?A 2, DB 0> 0 A, = HBB BWFB =B= " < , D<<= A 0;< ?, 2 0;>=@ < ;AB < ; ?, ; < 0 < (B < , , = ;AB A 0;< @: 0BB . , ?, : E<26 6 FF6 O 6

F , ; < ' 0 , ;6) , ? 00>0:' U,0' =B??2 , B=' ?, F; , ' < ' ;AB' ? ;@' , =' F B0B ;B=' U ;A' ,' D<2= A 2;B=' 0U< =6 AB' 2BE@' ' ((% < ' ;AB' ? ; RB 0' U ,0' ? , 22B=' K' ;AB' >0 , =B:8 , =' ;AB ' H , =DB' U , 0' ;AB' B=' ? <006 2 B' =B , 0' < ' B2 D < ' , =' F , ; <; 0 ' UB B' 0<' ??<0B2@' ;B ;U B=' ;A , ;' ;<' ;AB' 2 , @' ?< F , B0' < ' ;A 0' < ?B' UB B' , ;B Y U , =0' , ==B=' ;U<' ??B ?, 2' ?< F , B0:' < B' ?< F<0B=' < ' < 0' , =' , T0:' ;AB' <;AB ' < ' 0B?>2 , ' F B0;0' G , H<>;' ' < ' ;AB0B' B???B0 , 0; ?0' UB B' > =B ' , 0' A' #EB ' ;AB' U< B ' UB B' < D , RB=' ' 0M> , =0' < ' ;AB' ; , 0F< ;' < ' U<> =B=:' ;AB' ?, B' < ' ;AB' A<0F ; , 20:' , =' ;AB' ?, @ D' < ' F <E 0 < 0' ;<' ;AB' 0<2= B @' < ' ;AB' U , 220' G , H<>;' ' 0B EB=:' > =B ' ;AB' ?< , =' < ' * < , ' %>? , ' " ;RDB , 2=' , =' * < , ' 1 , , ' DB2 , ' # HB :' U EB0' < ' ;U<' < ; ?B 0' < ' ;AB' 8BD B ;' < ' ' 2;< , 6 " EB' < ' ;A 0' K' ?< F , @' < ' ;6' $, H , , ' 8' UB B' 22B=' , =' B2BEB ' U<> =B=' => D' ;AB' 0 DB6

AB' D , 0< ' , ;' ;AB' < B ;' < ' . B = B 80' 0;' , ; ; , ? ' ?< 0 0;B=' < ' , H<>;' :4 ' B :' <;' ??>= D' ;AB' BD>2 , 0' < ' ;AB' >0 , =B6 AB B' UB B' 0BEB ' H , ; ; , 2 < 0' < ' ;AB' <2=' , @:' HB2< D D' ;<' ;AB' BD B ;0' < ' ' 2;< , ' :' $< H< :' , =' . <2> ; , <0' =<' $, ?B2< , :' U ;A' ;A BB' H , ; ; , 2 < 0' < ' M>??B;B0:' ;U<' 2<?, 2' ?< F0:' 0;' , =' =' < ' (B < , :' , =' ;AB' 0;' < ' . ?A6 ' ?, E , 2 @' ;AB B' U , 0' , ' 0 D2B' 0M> , = < :' BU2@' 2BE B=:' ;AB' K' B0?> , = < ' =B' , ') , ? 0<68 ' , ; 22B @' ;AB B' UB B' H>;' 4 ' B :' , ' UA<22@' 0> 2 ? B ;' > HB ' G ;A B8< ?B 0' < ' ;A , ;' , ' 1' B B' D EB ' 4 ' < B' ;<' ; , :' F , ;2@' M>B2B;B0' < ' ;AB' =' (B < , ' H , ; ; , 2 < :' F , ;2@' 0 , 2< 0' A , E D' 0< B' 0 , 22' BWFB B ?B' < ' D> B @6 ;' E,0' = ?>2;' ;<' , B' F <FB ' >0B' < ' ;AB' D B , ;' 0;< B' < ' ?, < ' ' ;AB' < ; B00:' UAB ' < B' ;A , ' A , 2 ' ;AB' ; <<F0' , 22<;;B=' ;<' ;AB ' A , =' BEB ' HB < B' 0BB :' >?A' 2B00' 0B EB=:' , ' AB , E@' D> ' < ' F<0 ; < 6 <' ;AB' , H<EB' :4 ' B ' < ' , 22' , 0' >0;' HB' , ==B=' , H<>;' : ' BD>2 , 0' < ' ;AB' K >0 , =B8 V 0BEB ' 2 , @' , =' ;U<' ??2B ?, 2' ?< Y F , B0' < ' >0 2 B 0' , =' ;U<' < B' < ' , ; ?B 06 $>;' ;AB0B' UB B

' 2 B' H 0A<F' D , EB' A 0' 0 , ?; < ' ;<' ;AB' < , ; < ' < ' ;2 0' 0; , DB' ?< F0' 7 0BB' A 0' F <?2 , , ; < ' ' ;B?AB80' FFB = W' E 6' F6 =5:' = , ;B=' C> B' 56 ' ' 2;< , :' ;AB' BD B ;' < ' ' 20;B :' 0; 22' ?< ; , B=' , @' < ?B 0' < ' ;2 B' <2=' C , ?<H ;B' 0; , :' , 0' , @' HB' 0BB ' H@' ?< 0>2; D' ;AB' 2 0;' < ' 22B=' , =' U<> =B=:' UAB B' 0>?A' , B0' , 0' 8 * < B22:' 1 , ?, ;A@:') , 0A:' " ;RDB , 2=:' + B 0< :' <2BA@:' , =@:' <??> G A>;' ;' A , =' N>0;' HBB ' , 0B=' < ' ' ;<' ' H , @< B;0' H@' 22 D' ;AB' =BF2B;B=' . % > ;A' , ; , 2 , ' B? > ;0:' , =' , 22' ;AB' N> < ' 2 B>;B , ;0:' B E2@' , FF< ;B=:' UB B' , ; , 2 , 0' , 20<6 <' ;AB B' U , 0' 2 ; ;2B' 0A' , H<>;' ;' 0 , EB' ;AB' , B0' < ' 0< B' < ' ;0' 0B < ' < ?B 06

;AB F< ;: >F< ;AB , FF< ;B= DA;6) < F, , =HB; ,@B= ;AB F2<;: ;A<>DA P: ? ; RB 0 , B 0, =; < A, EB HBB ; AB 0B? B;: H>;; U,0 >0; , ;B= H@; U< < B D B 06 < 0? <>0 ;A, ;; AB ;<U ?<>2= <;HB BB= ;AB ? ; , =B2 < 1 < N> ?A U,0 B;, B= H@; AB " B ?A: ;AB ?< 0F ,;< T0 0<> =B= ;U< ;, 2 , < ?B 0 , B= ,F;, * <;;< : < ; ,=N>;, ; < . < N> ?A: , = ,F;, + <E, ,: UA< U,0 <U ;< HB = 0?< ;B ;B= , = ;A<>DA; ;< HB ?< >F; H2B6 AB@ < B B= ;AB , B 0B H HB V : : =<22, 0: ; 0 0, =V ;< HB; ,@ ;AB F<0;B < 1 < N> ?A ;< ;AB ; <<F0 < <>F D @: UA< UB B ;< HB B, =@ ;AB = ;?A , ; = DA;6 $>; ;AB@ A, = 0;, B ;AB B 7 ;AB < ?B 0 ?< B B=U ;A * >AB0 ?: , = ?< 0B ;B= ;< , ?; ,0 5% '( ) 2 '%: (G ;AB@F B;B =B= ;< N< ;2 B ?< 0F ,?@: UB B ; <Y =>?B= ;< , = A, = ;B E BU0 U ;A ;AB ?A B 0: , = < B= ;AB D<EB < 6 ;AB < D HB < B ;AB , FF< ;B= =, ;B , @ < ;AB 2B, =B 0 UB B , B0;B=6 * >AB0 B F2, ?B= D>, =0 BEB @ 0; BB;: , = F <?2, B= ;A, ; AB BU ,226 AB ? ; RB 0 B , B= M> B; ;AB =B0F, : ;2 B ?A B 0 UA< A, = <; HBB 0B RB= 2B=: , = ;AB ; <<F0 < ;AB %2<H BD, ; B; B= ; < , , D< ,6 * >AB0 B A, DB= A 0 ?, F; EB0: ; U< F B0;0 , B= (,22 , , = + <>: , @<> D B ?A, ; , B= 1 ,00, , :) , E, B< , <2= 0<2= B : , = <> <;AB 06 K AB@ UB ; ; < ;AB D, 22<U0:8 0, @0 . , ?, : , B@BY U; B00: K U ;A F =B: ?< E ?B= BEB @ < B < ;AB ;A, ; ;AB@ A, = =< B ;AB =>;@ < D<<= ? ; RB 0 HBA, 2 < D: ?<> ; @: , = B2 D <

D <00B= ;A 0 F2<;: ;AB < ? ,2 ?A B 0 < , ;, 2< , A, 2 < D<; (B < , : , = = <;A D ; < AB2F 2E, BR; 22 2< D , ;B ;AB 0 BDB A, = HBD> 6 AB < 2@ ,00 0;, ?B ;A, ; AB B?B EB= < U ;A<>; U,0 ;A, ; ;AB M>B2B;B0 , = ('% %(< ;AB F> =, , = ;AB <> ; , BD < , H<EB <0; , 2 ?A UB B ,2U, @0 0 0A D U ;A . B = B 80 <>;F<0;0: , = < ?B < ;U ?B ?>; < 8 A 0 ?< E<@0 < > ; < 0 < ;AB U, @ < " D>B , 0 ; < ;AB < ;6

AB " B ?A B D BB 0 UB B 0< BUA, ; , ; E, , ?B , 0 ; < ;AB DA; U, @ ; < =B, 2 U ;A (B < , 6 AB B EB B ; U< <HE <>0 , 2; B , ; EB06 , ; ; , ? < ;AB UB, < ; < < ;AB 1 B ?, =, 2 U, 0 ?B ; , ; < 0>??BB=G ;AB D <> = HB < B ;AB U, 220 U, 0 0> ; , H2B < ; B ?AB0: , = ;AB < ; ?, ; < 0 UB B ; 2 D6 $>; UAB

/C # . #)) # #) +)
,2<=DB B ;A ,= HBB ,= ;A 0 M> , ;B < ;AB ;<\E ;U<>2= HB B?B00 , @ ;< U< < U , =: , < D ;AB , <U 2 , B0 , = H , ?,=B0: ;< ;AB ,: , =;AB ;< ? <00 ;A , ; EB < =B ;< ?< ; >B 0 2 , <FB , ; < 0 ;A <>DA ;AB 0; BB;0 < (B < , 6 #EB UAB ;AB ? ;@ A ,= HBB 0>H=>B=: ;AB D , 0< DA;0; 22 A<2= <>; ;AB < =,H2B U< 0 < ;AB 1 < N> ?A , = ,F>?A AB DA;06 AB B=>?; < < ;AB 1 B ?,=,2 , =;AB ? ;@: < B<EB : U<>2= A,EB ;< HB ?, B= <>; > =B ,?< ; ><>0 F2> D D B < ;AB < ;0 ,H<EB: UA ?A <EB 2<< B=;AB UA<2B F2,?B6 A 0 =, DB U,0 B0FB? ,22@ 0 0;B=>F< H@ 0< B < ;AB B D BB < ?B 0: UA< =B?2, B=;A, ; ; U<>2= HB F<00 H2B < ;AB ; <<F0 ;< U< ;AB U,@ < U , =<EB D <> =0< BWF<0B=6 0 , , ;;B < , ?; ; U,0 F <EB=: , ;B ;AB 0 BDB U,0 <EB , =;AB < ;0 A ,= HBB BW, B= H@ ;AB ?, F;< 0: ;A , ; ;A 0 B, A ,= HBB BW,DDB , ;B=7 ;AB , D2B < B U,0 0>?A ;A , ; 2, DB 0B?; < 0 < ;AB ;<U UB B < <U ,@ ?< , =B= < ;AB AB DA;0: , = ;AB 0; BB;0 ?<>2= <; A,EB HBB 0B, ?AB= ;AB ,0A < ;A , ; U,0 ,D B=6 $>; ;A 0: <HE <>0 * B?B HB : ?<>2= <; A,EB HBB <U 1 ,@ AB 0B?< =,2;B , ; EB U,0 ;< ?< B ?B ;AB , ; ; , ? < (B < , <; < ;AB B,0 B0; H>; < ;AB <0; = ?>2; 0 =B: H@ H, ; ;B D ;AB 2< ;@ < ; < 1 < N> ?A < ;AB A DA F2, ;B , > HB0 =B ;6 AB =B B ?B0 AB B UB B EB @ < =,H2B6 ;AB D <> =U,0 H, B BWF<0B= <? 6 H>; 1 < N> ?A UB B < ?B ?,F;> B= ; U,0 ?,2?>2, ;B= ;A , ; ;AB ;<U >0; 0> B =B : ,0 ; U,0 ?< F2B;B2@ <EB 2<< B= H@ ;AB < ;: , = A,= < > ;AB F <;B?; < 0,EB ;0 , ; M> , ;B= B= ,BE,2 U,226 AB =B=>?; < ;A , ; ; U<>2= HB ?AB , FB ;AB B = ;< HBD U ;A ;AB = ?>2; ; ,0 < ; , D 1 < N> ?A: ,;AB ;A , ;AB B,0 B <FB , ; < 0 ,D , 0; ;AB 1 B ?,=,2: 0BB B= F2, >0 H2B6 ;0 ,>2; U,0 ;A , ; ; F B0>FF<0B= ;A , ; 2E, BR , = A 0 D , 0< U<>2= HBA , EB ,??< = D ;< ;AB ,??BF;B= >2B0 < 0 BDB? , ;: , = @ B2= UAB ;AB 0 ;>, ; < HB?, B A<FB2B006 $>; =B,2 D U ;A F, 0A D , 0< 0 ;AB >2B0 < 2 ; , @ 2<D ?= = <; ,2U,@0 ,?;6 2E, BR B00,@B= ;AB F<00 H2B: , = AB2= <>; HBA = A 0 =B B?; EB =B B ?B0 < <> < ;A0 , ;B 1 < N> ?A B226 AB 2<00 < B , = ; B ;A , ; AB ;AB BH@ 2 ?;B= < ;AB " B ?A U,0 ?B ; , 2@ <2B00 ;A , ;A , ; UA ?A U<>2= A,EB HBB 0> B B= ;AB HB0 BDB 0 A,= HBD> U ;A ;AB 1 B ?,=,2: , = U< B= >FU , =0 H@ ?B00 , ;

0; BB;' 2 DA; D' ;<U , =0' ;AB' < ;0' < ' ;AB' AB DA;6 $>;' ;' 0' A , =' ;<' 0 ,@' ;A , ;' . B = B ' B B=6 AB' = =' <;' <U' A 0' ,=EB 0 , @:' , =' AB' = =' <U:' < ' A 0' BWFB B ?B0' , ;' , ,D<00 ,:' U2 , ;' 0; BB;' DA; D' B;> ;6

;' ,@' HB' ,==B=' ;A , ;' . B = B 80' E BU0' UB B' ,??BF;B=' H@' ;AB' B D BB DB B ,2:' , 0< :' UA<' A ,=' 2WW7 ' 0FB? ,22@' 0B ;' < ' " 8, ??' H@' ;AB' # FB < :' ;<' D EB' A 0' <F < ' < ' ;AB' HB0;' <=B' < ' F <?B=> B6 AB' =<?> B ;' UA ?A' . B = B :' , 0< :' , =' ,E B2' I;AB' ?< , = D' , ; 22B @' < ?B ' < ' ;AB' ;A' < F0J' 0B ;' ;<' + , 0:' ;<' N>0; @' ;AB ' ?A< ?B' < ' ;AB' >FFB ' F< ;' < ' , ;; , ? :' 2, @0' 0; B00' , 2@' < ' ;AB' F<00 H 2 ;@' < ' ,=E , ? D' < ' ;AB' 1 ? ?, = , 2' > =B ' ;AB' B' < ' ;AB' >FFB ' < ;0' ' $>;' ;AB B' UB B' <;AB ' B ,0< 0' < ' 0B2B?; D' 1 < N> ?A' ,0' ;AB' F< ;' < ' , ;; , ? 6 ;' 2, @' , ' B, B ' ;<' ;AB' <, =' ;<' " , ?B' , =' ;AB' ?B ; ,2' 0 BDB =?F=;0' HB0 =B' , ,' , =' ;AB' +< ;' 1 ,@< 6 AB' ,FF <, ?AB0' U<>2=' HB' <EB ' A DA2@' =B B 0 H2B' D 8<> =' UAB B:' ' ,' = 0 , 0;B ' <??> B=:' ;AB' =B B , ;B=' ,00 , 2, ;' ?<>2=' B , 0 2@' B?<EB ' A 0B2 ' , =' <FF<0B' ,' 0; < D' < ;' ;<' ;AB' B B @6 AB' 0A< ; B00' < ' ;AB' < ;' U ,0' 0> ; , H2B' < ' , ' , @' < ' ;AB' <=B , ;B' 0; B D;A' < ' O: ' B :' UA ?A' A , =' ;<' =B , 2' U ;A' ,' < ; B00' UA<0B' FB B;B :' , 22< D' < ' <>;2@ D' < ;0' , =' ,??B00 H2B' F B? F ?B0:' U ,0' 0< B' 0 W 2B06 1 < B<EB :' ;AB' D <> =' ' < ;' < ' ;AB' 1 B ?, = , 2' A , =' ;AB' 0B <>0' ?< EB B ?B' < ' HB D' 2 , H2B' ;<' > =, ; < 7 0> B ' 0F, ;B0' < ' ;AB' B ' , =' ,' , B' , B:' H>;' <??> ' < ' ; B' ;<' ; B7 , =' ;AB B' U ,0' ;AB' H, B' ?A , ?B' ;A , ;' UAB ' ;AB' ; B ?AB0' A , =' HBB ' <FB B=' ,22' DA;' HB' 0UBF;' , U , @' H@' ;AB' EB 0

. B = B 80' <F < ' U ,0' , EB=' , ;' , ;B ' , ;> B' B 2B?; < 6 ;AB' " B ?A' A , =' , FFB , B=' ' < ;' < ' (B < ,' < ' 1 ,@' 6 ;AB' <>;Y 2@ D' E 22 , DB0' < ' ;AB' B , 0;' A , =' HBB ' <??>F B=' HB;UBB ' ;AB' ;UB2 ;A' , =' B DA;BB ;A6 %B??A 80' ;, 2 , 0' A , =' ??2<0B=' ;AB' UB0;B ' BW ;0' H@' <??>F@ D' ;AB' F2, ' < ' ,2;' < ' ;AB' ;UB ;@ ' <> ;A' 6 ;AB' B ' F<0;0' < ' <H0B E , ; < ' < ' ;AB' F, , =0' A , =' HBB ' ??2B , B=' < ' UAB :' < ' 1 ,@' :' ;AB' ; , 2 , 0' 0B RB=' ;AB' 0>H> H, ' E 22 , DB' < ' , ; ,' #>DB ,:' , =' < ' C> B' ' ;AB' (B , 0' ;<< ' F<00B00 < ' < ' ;AB' <> ; , ' < ') >B0; ,' B < ,' =B' 2<0' DB2B06 $>;' ;' U ,0' < 2@' < ' C> B' P' ;A , ;' ;AB' HB0 BDB 0' H < B' D <> =:' , =' ?< B ?B=' ;AB ' ; B ?AB0' , =' H , ; ;B B0' < ' ;AB

T BB' ;AB ' 2B ; ;B ' ' FFB = W' .' ;<' $B2 , O80' , ??<> ;' < ' ;AB' 0 BDB6

T) <;B:' H =6:' 6 F6 6

U< =,@0 2,;B ;AB ;<UB 0 < , %> 0 , = ,) , ? 0<: UA ?A A,= HBB B=>?B= ;< 0A,FB2B00 AB,F0 < 0;< B: UB B ?, B= H@ ,00,>2;: U ;A ,2<00 ;< ;AB " B ?A < < 2@ 4 B 7 H>; , ;,;B F; ;< ?, @ , * , B2 H@ ;AB 0, B >0A U,0 HB,;B < : ;A 0 B=<>H; HB D 0; 22 ,;B ,H2B 0 ' ;B6 ;0 D< DB: A<UBEB : U,0 ?< F2B;B2@ ?< , =Ba2 < ;AB > 0 < , %> 0: , = ,??B00 ;< < BW ; < ; ;U,0 B =B B= 0< =, DB <>0 ;A,; 2E, BR U ;A= BU ;0 D, 0< < < ;AB BW; DA;6 AB F<ON B00 < < ;AB0B ;A BB <>;U< 0 H <>DA;;AB " B ?A ?2<0B >F ;< 1 < N> ?A: UA ?A ;AB@ ?<>2= <U ,;,? < D <> = UA ?A U,0 ,E<> ,H2B BEB @ B0FB?;: 0,EB ;A,; ; U,0 H, B <? 2,? D 0< 26 ; U,0 F<00 H2B ;< BW?,E,;B ;: , = ,22 ,=E, ?B0 A,= ;< HB ,=B 2J@ H> 2= D ; B ?AB0 I ;AB U< = 0 <; , 0 < B ;A 0 ?,0BJ < 0N =H,D0 , = 2<<0B 0;< B0 < ;AB 0> ,?B < ;AB D <> =6 AB B U< D , ;;AB B = < ;AB 0,F UB B ;AB B < B ?< F2B;B2@ BWF<0B=: , = ;AB U< ?<>2= < 2@ F <?BB= , ; , D B, ; BWFB 0B < 2 B6) BEB ;AB2B00 ;AB F BF, , ; < 0 ,=E, ?B= ,F =2@: , = < ;AB DA; < C>2@ /, B < <>0 H, ;;B @ < 0, =H,D0 I?,22B= ;AB D ''% %)2 3% U,0 ;2> <U >F , ; , = 0;, ?B < < 2@ <> A> = B= @, =0 < 1 < N> ?A6) BW; < D ; <FB B= < ;AB < ; U ;A ;UB ;@ P , = O F<> =B 0: , = 0<< B0;,H2 0AB= , 0>FB < ;@ <EB ;AB B < ;AB =B B ?B6 BEB ,2 F, 0A F B?B0 UB B = 0 <> ;B=: <;AB 0 A,= ;< HB B <EB= HB?,>0B ; U,0 ;<< =B,=2@ ;< 0B EB ;AB 6 $>; , 0;B,=@ B U,0 B;> B= ,D, 0; ;AB HB0 BDB 0 < ;AB < 0;,H2B , = ,2E, @ < ;0: < ;AB <;AB 0 =B < ;AB (,22 D, ,E B6) BEB ;AB2B00 1 < N> ?A HBD, ;< ? > H2B: , = ;2<< B= ,0 ;AB B = < ;AB 0 BDB UBWTB ,2 B,=@ ,FF <,?A D6 C>2@ ;AB B U,0 , H B,?A ;A ;@ EB BB; H <,= ;AB < ;80 < ;A B,0;B H,0; < : , = ;AB F, 0A 2,D UA ?A 2<,;B= <EB ; U,0 ;A <U =<U ;< ;AB = ;?A H@ , ?A, ?B 0A<;6 @<> D < ?B , B= 1 < ;< < ?2 HB= =<U : H <>DA; ;>F: , = , 2B= ; ; < , BU 2,D0;, ;8 > =B ;AB B < ;UB ;@ D> 06 1B, UA 2B 2< D 0; B;?AB0 < ;AB F, ,FB; < 1 < N> ?A UB B > B=: ;AB = ;?A U,0 A,2 22B= U ;A =BH 0: , = ;AB D, 0< ?<>2= < 2@ F <;B?; ;AB 0B2EB0 H@ A,0;@ BWB?; < 0 < D,H < 0 , =0, =H,D0: F2,?B= UAB B ;AB ? B0; < ;AB ,0< @ A,= 0;<<=6

$@ ;A 0 ; B ;6 @ , = ;AB ?<EB D , @ A,= ,H, =< B= ;AB F<0 ; < ;AB F2, < . ?A UA ?A ;AB@ A,= 0< 2< D

<??>F B=6' AB' DB B ,2' A,=:' ,0' ;' 0BB 0:' ?< E ?B=' A 0B2 ' ,;' 2,0;' ;A,;' $2, B:' UA<' U,0' 0; 22' B D,DB=' ' A 0' > 2>? @' ,D< B0B' ?, F, D :' U,0' <;' 2 B2@' ;<' ,FFB, 6' B' ;AB B < B' <EB=' B, B ' ;<' (B < ,:' ' < =B ' ;<' BF B00' ;AB' B < ;0' < ' ;AB' 2<?,2' ('% (;' UA<' UB B' D E D' >?A' ; <>H2B' ;<' . B = B 80' ?< > ?,; < 06' ' C> B' ' AB' B0;,H2 0AB=' A 0' AB,=' M>, ;B 0' ,;' ,2=,0' =B' 1,2,EB22,:' 0< B' B' 2B0' ;<' ;AB' 0<>;A B,0;' < ' (B < ,6' A,;' 0, B' BEB D' < B' < ' A 0' ;,2 , ' H D,=B0' ;B ?BF;B=' , =' ?,FY ;> B=' ,' ?< E<@' < ' : ' <WB ' UA ?A' ;AB' (<EB < ' < ' <0;,2 ?A' U,0' ; @ D' ;<' ; <=>?B' ;<' ;AB' HB2B,D>B B=' ? ;@' ,2< D' < B' < ' ;AB' <> ;, F,;A0' UA ?A' 2B,=' ;<' ;AB' ,F>?A ' AB DA;0' < ' ;AB' ?<,0;6' ;6' @ ' 0; > D' <>;' A 0' O: ' B ' ' ,' 2 B' < ' , ' "B2 >' =B' (> W<20' < ' ;AB' 0B,' ;<' ;AB' >FFB ' B :' ' ,' 0B Y ? ??2B' UA ?A' ?<EB B=' ,22' ;AB' ,FF <,?AB0' ;<' (B < ,' 0,E D' ;A<0B' < ' ;AB' F> =, 6' B' E 0 ;B=' . B = B 80' ?, F:' Y 0FB?;B=' ;AB' 0 BDB' <FB ,; < 0:' , =' BWF B00B=' A 0' <F < ' ;A,;' , ' ,;;,? ' < ' ;AB' 1 B ?,=,2' < ;' U<>2=' A,EB' HBB ' F B B ,H2B' ;<' ;A,;' UA ?A' A,=' HBB ' ,?;>,22@' ?A<0B 6' $>;' AB' U,0AB=' A 0' A, =0' < ' ,22' B0F< 0 H 2 ;@:' ;<2=' . B = B ' ;A,;:' 0 ?B' AB' A,=' ?A<0B ' ;<' ?< B0F< =' = B?;2@' U ;A' +, 0:' AB' >0;' ;, B' ,22' ;AB' F , 0B' < ' H2, B' B0>2; D' < ' A 0' ?A< ?B:' , =' B >0B=' ;<' ?<> ;B , =' < ' ;<' ,2;B ' , @' < ' A 0' 0>H< = , ;B80' = 0F<0 ; < 06' ' C>2@' ' A<UBEB ' AB' 0B ;:' U ;A' 0< B' 2,? ' < ' 2<D ?:' ,' 0> < 0' < ' A 0' <U ' ;<' 2E, BR:' E ; D' A ' ;<' 0> B =B ' < ' ,??<> ;' < ' ;AB' =B0FB ,;B' 0;,;B' < ' A 0' =B B ?B0' ;A 0' AB' = =' U ;A<>;' < D' . B = B ' < ' A 0' <EB6' AB' (<EB < ' 8B;> B=' , ' = D , ;' BD,; EB:' , =' . B = B ' U <;B' ' D B,;' U ,;A' ;<' ?< F2, ' ;A,;' ' ;AB' 0 BDB' U,0' A 0' , , :' ,0' AB' A,=' N>0;' HBB ' ;<2=:' ;' U,0' < 0; <>0' ;A,;' A 0' ?< , =B ' 0A<>2=' ?< B0F< =' U ;A' ;AB' D, 0< ' U ;A<>;' A 0' <U2B=DB' A' AB' ;U<' DB B ,20' UB B' 2B ;' < ' BEB ' U< 0B' ;B 0' ;A, ' HB < B6' ;6' @T:' A<UBEB :' D,EB' B,2' ,00 0;, ?B' ;<' ;AB' 0 BDB' <FB ,; < 0' ,;' ;A 0' ; B' H@' 0;< D:' < ' C>2@' :' ;AB' 2 ;;2B' < ; B=' A, H<> ;<U ' < ' +,2, <0:' UA ?A' 2 B0' < ' ;AB' F< ;' < ' ;AB' 0B, ?<,0;' B, B0;' ;<' (B < ,:' , =' A,=' HBB ' A ;AB ;<' >0B=' H@' ;AB' M>B2B;B0' ,0' ,' H,0B' < ' UA ?A' ;AB@' ?< > ?,;B=' H@' DA;' U ;A' ;AB' < ; B00:' , =' ,;' ;AB' 0, B' ; B

' BB' ;6' @ ';<' 2E, BR' , =' . B = B ';<' ;AB' 1 0;B ' < ' & , ' ,;' +, 0:' <06' 5' , =' ' < ' $B2 ,080' FFB = ?B0' ' A 0' 0B?< =' E<2> B:' FF6' P44' , =' P4 6

QJS 1 % !) . # * # 1 !

=BB=: ;AB@ A = HBB F,00B= U ;A 2 ; ;2B 2<006 AB 0; , B < . B = B A,= HBB ; ;A, ;' AB , ; ; ,? B= HB < B ;AB D, 0< U,0 =B < ,2 RB= V ;AB 0, B B < ,=B H@ ;AB # D2 0A , ;' $, = , N<R ' , = , ;' , BH,0; , ' 6 H <,= H B,?A H@ ;0B2 '=<B0 <;' B?B00, 2@ , B , ' F2,?B > ;B ,H2B:' ;AB 0F ;' < ';AB =B B =B 0 0 A DA:' , = ';AB@ , B F BF, B= U ;A ,22 ;AB B0<> ?B0 < ';AB 2 ; , @ , ;' < B0 0; D ;AB 0;< B 0: ,0 UB B ;AB (B < B0B < C>2@ 4 6 AB D, 0< 2<0;:' ;' ,@ HB B , B=:' < 2@ B :' <>;' < , 0; B D;A < 4 4 F B0B ;' ;AB < 8;' ;A, ;' < D6 AB ?,0>,2;@ 2 0;:' A<UBEB :' U,0 0< BY UA, ;' ? B,0B= H@ ;AB ,?? =B ; ,2 BWF2<0 < :' ,FF, B ;2@ H@ ,' ?, B2B00 D> B :' < ';AB ,D,R B < ';AB ;<UB ' < ' , ' C>, :' ,2< D0 =B < ';AB (,22 D, :' UA ?A U,0 =B0; <@B= U ;A ;0 2 ; ;2B D, 0< ' < ';UB ;@ EB B 6

AB 8BF>20B < ';AB ,00,>2;' < ' 1 < N> ?A ;A< <>DA2@ =B < ,2 RB= ;AB HB0 BD D , @6 ;AB B0 0; , ?B < ';AB F, , =0 A,= HBB 0< B ?B:' ;AB 2<00 ;AB@ A,= 2 ?;B= 0< AB,E@:' ;A, ;' . B = B 8 <;2B@ ?<22B?; < ' < ' " B ?A:' (B , :' %< H, =:' , =) B,F<2 ; , BD B ;0 2<0;' AB, ;' , = ?< =B ?B6 AB ' 2<U 0F ;0 UB B ,=B , B0;' H@ ;AB 0 >2; , B<>0 <>;H B, ' < ' =B0B ; < ' , = = 0B,0B:' ;AB ;U< BE ; ,H2B , 0 < ' ,' =B?,@ D < ,2B6 22 ;A <>DA ;AB 0B?< = A,2 ' < ' C>2@ , = >D>0;' ;AB A<0F ; ,20 D BU D ,=>, 2@ >22B :' <;' < 2@ < ' 0> 0; < B ?,0B0 IUA ?A UB B BM>B ;' < ' ;AB H, B:' A<;:' <? @ D <> = < ' ;AB AB DA;0J:' H>;' < ' =@0B ;B @ , = ,2, ,6 AB H, 0 < ' ;AB B ' ,2U,@0 F<00B00B= ,' BF>; , ; < ' < ' BF =B ?0 V ;U ?B ' B, 2 B ' ?B ;> B0 ,' " B ?A , @ A,= FB 0AB= HB < B ;AB U,220 < ' (B < ,' H@ F2,D>B0:' UA ?A ;AB ? ; RB 0 F <>02@ , ; ; H>;B=' ;<' ;AB ' F, ; < :' , ') , ? 0<6 ;' U,0 , 2@ HB?,>0B AB B,2 RB= ;AB =BF B00 < ' < ' A 0 ; <<F0 ;A, ;' . B = B ' B , B= < ' , @ < B ,00,>2;0:' , = UB ;' < ' < ' C>2@ 5 ;<' >D>0;' O H, ; ;B D 1 < N> ?A ?B00, ;2@:' UA 2B AB ?, >; <>02@ F>0AB= < U, = A 0 ; B ?AB0:' ; 22 ;AB@ , ?;>, 22@ B,?AB= ;AB = ;?A < ';AB =B 2> B UA ?A ?<EB 0 ;AB < ;AB ' < ;' < ';AB < ;6 AB D, 0< ' U,0 , H0<2>;B2@ <EB UAB2 B= H@ ;AB ?B00, ;' H< H, = B ;:' UA ?A =B0; <@B= BEB @ F B?B < ' >F0; , = D ,0< @:' , = F BEB ;B= ;AB ' < ' BH> 2= D , @;A D ;A, ;' U,0 =B <2 0AB=6 AB@ UB B < ?B= ;<' 2> ' ' ;AB ?,0B , ;B0:' , = ;<' H> <U < ' 0AB2;B ' ' ;AB =BH 0 UA ?A 22B= ;AB ;B < ' < ' ;AB U< 6 A BB 2, DB H B,?AB0 A,=

1)6 22' 6' *

5S 1 22 %%8 ' * # '

F, 0A' DB B ,20' <>;0 =B' ;AB' < ; B00' A,=' ,;' 2,0;' HBD> ' ;<' , B' 0B <>0' B < ;0' < ' ;0' ,00 0;, ?B6) <;' < 2@' A,=' ;AB' (' %(' B=<>H2B=' ;AB ' ,?; E ;@' ,D, 0;')8B = B 80' ?< E<@0:' , =' 0BEB ,2' ; B0' 0>??; W2B=' ' =B0; <@ D' ;AB ' < ' ;> D' ;AB ' H,? :' H>;' <>F D @' A,=' ,;' 2,0;' HBD> ' ;<' <EB:' < ' AB' 0,U' ;A,;' 0 ?B' $2, B 0' <>;' ,;' $B2?A ;B' < ' C> B' ' AB:' , =' AB' ,2< B:' F<00B00B=' , ' < D, RB=' H<=@' < ' ; <<F0' < ' ;A 0' 0 =B' < ' F, :' 0 ,22' ;A<>DA' ;' U,06 ' ,H2B' ;<' ; ?B' ;6 @ ' ' ;AB' B2=:' AB' ; B=' ,;' 2B,0;' ;<' ;A <U' 0>??<> 0' ;<' (B < ,' H@' ;AB' <> ; , ' F,;A0' < ' ;AB' 0<>;A:' ' AB' ?<>2=' =<' <' < B6 ' AB' 0;' ,;;B F;' U,0' = 0,0; <>0G ;A BB' H,;;,2 < 0' 0;, ;B=' < ' 2<0;,2 ?A' > =B ' , ' # D2 0A' ,=EB ;> B :' ,2FA' 1, 0A,22:' UA< ' 2E, BR' A,=' 0>DDB0;B=' < ' ;AB' ?< , =' < ' ;A 0' BWN B= ; < 6' AB@' BE,=B=' ;AB' 0;' 2 B' < ' ;AB' ?<EB D' , @:' H>;' ,;' ,0;B22, :' < ' C>2@' :' R, ' ;<' ;AB' EB @' ?B ; B' < ' + <80' = E 0 < :' UA ?A' A,=' ?< ?B ; ,;B=' < ' ,22' 0 =B0' < ' ;AB ' =B0; >?; < 6' 1, 0A,22' B0?,FB=' ;<' (B < ,' U ;A' <' < B' ;A, ' ;UB2EB' B G O ' < ?B 0' , =' ' , ' , =' 2B' 2, =' =<U ' ;AB ' , 07' ;AB' B0;' < ' ;AB' ?<2> :' 0< B' P ' < ' 4 ' B :' BE,=B=' 0> B =B ' H@' = 0FB B < 6

#M>,22@' = 0,0; <>0:' ;A<>DA' < ' ,' 0 ,22B ' 0?,2B:' U,0' , <;AB ' ,;;B F;' ,=B' < ' >D>0;' O' H@' ,' F, ;@' < ' ' M>B2B;B0' ;<' B ;B ' (B < ,G ;AB@' B2>=B=' ;6 @ :' H>;' < ' , E D' ,;' ;AB' B ; @' < ' ;AB' (,22 D, :' ??<0B' > =B ' ;AB' < ;0:' ,=B' ;AB' > < ;> ,;B' 0;, B' < ' B ;B D' ;AB' ?< EB ;' < ' , ' *, B2:' UA ?A' ;AB' D, 0< ' A,=' HBB ' ?< FB22B=' ;<' BE,?>,;B' ,' BU' =,@0' HB < B6 ;' U,0' <U' ' ;AB" B ?A' 2 B0:' , =' ;AB' ,;,2, 0' UB B' ,22' ;, B ' F 0< B 06 ;' U,0' <;' ; 22' >D>0;' 4:' 0 W' =,@0' , ;B ' ;AB' ,22' < ' 1 < N> ?A:' ;A,;' 2E, BR' <H;, B=' A 0' 0;' BBH2B' B < ?B B ;G ;AB' M>B2B;B' H,;;,2 < ' < ' B EB ,:' U ;A' ,' = , ;' < ' ;A,;' < ' . ?A' ,2 B,=@' ' ;AB' D, 0< :' ,2;<DB;AB ' ' H,@< B;0:' D<;' ;<' ;AB' ? ;@' < ' ;AB' UB0;' 0 =B:' H@' B2>= D' %B??A 80' ;,2, 0' ' ;AB' F2, ' , =' < = D' ;AB' B 6' AB@' UB B' >?A' BB=B=:' < ' 2E, BR

T ;6 @ :' . ,?, :' , =' $B2 ,0' ,22' 0,@' ;A,;' 1, 0A,22' B0?,FB=' H@' A< 0; D' ;AB' UA ;B' 2,D:' , =' ;, D' ;<' ;AB' A 220' UA 2B' ;B 0' < ' ?,F ;>2,; < ' UB B' HB D' , , DB=6 <>F D @' < ' ;AB' <;AB ' A, =' I0BB' A 0' 2B;;B ' ' $B2 ,0 0' FFB = W' <6 J' 0,@0' ;A,;' 1, 0A,22' HBA,EB=' ,= ,H2@:' H>;' U,0' <;' 0B?< =B=' H@' A 0' B :' UA<' 2 ?AB=' , =' ,H, =< B=' A 6' ?A:' ;AB' < 2 ?B ' UA<' , 2B=' ;<' D> =B' ;AB' ?<2> ' , DA;:' U,0' <;:' ,0'),F B ' 0>FF<0B=' I 6' J:' , ' # D2 0A , :' H>;' ,' ,;,2, :' ,0' 0' 0A<U ' H@' A 0' A 0; , ' , B'), ? 0<6 ?' < ' ?A' 0' ,' ?< < ' , B' ' ,;,2< ,6

P' # . #) ') ' # #) ' +) ' X <6 4

U,0 ?< F2, D ;< ;AB , ; , 2, C> ; , ;A , ;' AB A , = <U < 2@

: , H2B H<= B= B 2B ;< A 0 < D , 2 :

. B = B A , = U ; ; B ; < A 0 , 0 ; B : , ; B ; AB ? , F ; > B < 1 <

N> ?A: ; < , <> ?B ; A , ; (B < , >0; , 22 H2@ 0> B =B U ; A

B DA; < ; B = , @0 <U ; A , ; ; A , = <; A D H>; , , ; M> , ; B=

B= , BE , 2 U , 22 ; < <FF<0B ; < A 0 ? , < 6 < , : A<UBEB : U , 0

AB < HB D , ; >B F <FAB; ; A , ; : , 0 , , ; ; B < , ? ; : ; AB

0B?< = , = 2< DB BF 0<=B < ; AB 0 BDB: UA ?A UB 0 ; < HB F <Y

; , ? ; B= , ; < ; AB U ; B : A , = < 2@ N>0; HBD> 6

A 0 >0; 2 , EB HBB , BW , DDB , ; < : , 0 : B > =B , 0 < ;AB <2= D, 0< 0> E EB= ; < 0> B =B * B?B HB 6 BB 2E, BR8 0 2B ; ; B : < F6 P P < $B2 , O8 0 FFB = W6

T BB . B = B 8 0 2B ; ; B < >D>0; : $B2 , O8 0 FFB = W <6 : F6 4 6

% & " ' O) N ' % ! $ '

#' " %%' "' (#) 6 " (' * # # 1 $ # :' 5

& 9 /' 1 < N> ?A' A, =' HBB ' BE, ?>, ;B=:' ;AB' F<0 ; < ' < ' (B < , U, 0' > =<>H;B=2@' FB 2<>06 < ' ;AB' ;U<' <> ;, ' 0> ;0' UA ?A ?< , =' ;AB' ? ;@' < B' U, 0' <U' B ; B2@' ' ;AB' A, =0' < ' ;AB " B ?A7 < ' <;' < 2@' ;AB' D B, ;' < ;' ;0B2 ' H>;' 0BEB ,2' < ' ;AB 0 ,22B ' U< 0' , H<EB' ;AB' ,E B' < ' ;AB' (,22 D, V 0>?A' 0' ;AB < ; B=' ?< EB ;' < ' , ' * , B2' , =' ;AB' > B=' ;<UB ' < , ' C>, V A, =' HBB ' 2<0;6' AB' < ;' BWF<0B=' ;<' , ;; , ? ' <U ?< 0 0;B=' < ' ;AB' < ;AB ' 0B?; < ' < ' ;AB' <2=' ? ;@' U, 22:' < ' ;AB H, 0; < ' < ' , ;,' 1 , ,' , ;' ;AB' U, ;B 80' B=DB:' ;<' ;AB' ;<UB ' < %, ' (< B22, :' UA ?A' < 0' ;AB' 6 < ;A B, 0;B ' , D2B' < ' ;AB F2, ?B:' , =' 2 B0' > ;AB ' >F' ;AB' 02<FB' < ' ;AB' , F>?A ' AB DA;0 ;A, ' , @' <;AB ' F< ; < ' < ' ;AB' B ?B ;B6' AB' 0F, ?B' HB;UBB ;AB0B' ;U<' F< ;0' U, 0' 0 F2@' ?<EB B=' H@' , ' B= , BE, 2' U, 22' 0B; U ;A' 0 , 22' , _<> =' ;<UB 06' B ;AB ' ;AB' ;<UB 0' < ' ;AB' ?> ;, ' HB;UBB ' ;AB ' A, =' HBB ' H> 2;' ;<' A<2=' , ; 22B @6' =BB=' ;AB' < 2@' 0F<;0' < ' ;A 0' < ;' UAB B' D> 0' A, =' HBB ' F2, ?B=' UB B I J' ;AB' ?< F, , ; EB2@' <=B ' H, 0; < ' < ' , ;,' 1 , ,:' I J' , U< ' B B?;B=' > =B ' , =' , H<>;' ;AB' (< B22, :' , =' ?, 22B=' ;AB' B=<>H;' < ' ;AB' (B , 0:8' , =' I :' OJ' ;U<' F, ;0' < ' ;AB' U, 22' ?, 22B=' ;AB' F2, ; < 0' ' < ' , ' +B= <' , =' , ' 0;<H, 2:' UA ?A' A, =' HBB ' U =B B=' ; 22' ;AB@' ?<>2=' ?, @' ,' BU' AB, E@' D> 06' ' ;AB' B0;' < ' ;AB' B ?B ;B:' <U D' ;<' ;0' , <U B00:' <;A D' H>;' U, 22 F B?B0' , =' ;U< F<> =B 0' ?<>2=' HB' <> ;B=6' AB' F, ;0' < ' ;AB' ?> ;, ' <0;' BWF<0B=' ;<' , ;; , ? ' UB B' ;AB' 0B?; < 0' , B=' , ;,' >? ,:' , ' +B= <:' , ' 0;<H, 2:' , =' %, 0' , , ? , 0:' < ' ?A> ?AB0' < ' M>, ;B 0' UA ?A' 2, @' ?2<0B' HBA =' ;AB 6' & ;A' <;A D' H>;' , ' , ; M>, ;B=' U, 22:' 0BEB ' ;<' B' BB;' ;A ? :' ;A ;@' BB;' A DA:' , =' =B0; ;>;B' < ' ,' = ;?A:' ;' 0BB B=' ;A, ;' ;A 0' 0 =B' < ' (B < ,' U, 0' =<< B=' ;<' =B0; >?; < ' U ;A ' ,' BU' =, @06

$>;' ;AB B' UB B' F< ;0' ' ;AB' F<0 ; < ' UA ?A' B =B B=' ;AB

' < B' ?, 22' ;AB ' H, 0; < 0:' H>;' ;AB@' , ?' ;<<' 0 , 22' ;<' =B0B EB' ;A, ;' , B6

A 0' , ; 22B @ B ' , =' 0,FFB 0:' A,=' 2B00' ;A, ' : ' B ' 2B ;' < ' ;AB' 0 BDB:' , =' ;AB0B' >?A' = 0?<> ,DB=' H@' ;0' ;B ,H2B' 2B D;A:' 0A< ;' < ' < ?B 0:' , =' 0 ? 2@6' A 0' U,0' <;' B <>DA' ;<' D>, =' ,' FB FAB @' < '0 W' 2B0:' , =' B00B DB 0' UB B' ?< ; >,22@' 02 FF D' ' < ' <>;' < ' (B < ,:' HB;UBB ' ;AB' U =B2@' 0?,;;B B=' ?, F0' < ' ;AB' " B ?A6

' >D>0;' 9 ' ,' BU' FA,0B' < ' ;AB' 0 BDB' HBD, 6' ' B0F< 0B' ;<' ;AB' ?< 0;, ;' ,FFB,20' < ' 2E, BR' ;<' ;AB' ,;,2, ' C> ;,:' , =' ;AB' ?< 0BM>B ;' ?< F2, ;0' < ' ;AB' C> ;,' ,2 B' ;<' ;AB' ,F;, ' (B B ,2' $2, B:' , =' ;<' ;AB' ?B ; ,2' D<EB B ;' ,;' BE 22B:' 0< BY ;A D' U,0' ,;' 2,0;' ,H<>;' ;<' HB' =< B' ;<' B2 BEB' (B < ,6' AB' 0>F B B' B ; ,2' C> ;,:' ' BF2@' ;<' ,' < ,2' BF B0B ;,; < '< ' ;AB' ,;,2, 0' =,;B=' >D>0;' P' A,=' 0B ;' $2, B' P: : ' B,20' ' ?,0A:' , =' ,' FB B F;< @' < =B ' ;<' , ?A' < ' (B < ,' UA,;BEB ' ;AB' 0;,;B' < ' A 0' , @' DA;' HB:' ,>;A< R D' A ' ;<' ?,22' <>;' ,22' ;AB' ('% %(' < ' ;AB' F <E ?B' ' A 0' , =6' AB' DB B ,2:' UA<' A,=' ,;' 2,0;' B;> B=' ;<' , ,D< ,:' <HB@B=:' ;A<>DA' B ; B2@' 2,? D' ?< =B ?B' ' A 0' B, 0' < ' 0>??B007' , =' < ' ;AB' ;A ;@ ' 0;' A 0' ,=E, ?B' D>, 8=' U,0' 0 0A D' U ;A' ;6' @ 80' ?<EB D' , @' < ' ;AB' AB DA;0' ;<' ;AB' 0<>;A' < ' ;AB' B 6

$2, B80' , @:' ;' E22' HB' B B HB B=:' A,=' HBB ' ?< F2B;B2@' <>;B=' ,;' $B2?A ;B' H@' >?AB;' < ' C> B' 6' AB' U BB 0' < ' A 0' ,D< B0B' = E 0 < ' A,=' D ,=>,22@' ,22 B=' ,;' < ;<0,:' ;A<0B' < ' A 0' . ,2B ? , ' = E 0 < 0' ,;' 1 < B2 ,6' H>;' BEB ' H@' ;AB' B =' < ' C>2@' AB' A,=' < 2@' ,' BU' ;A<>0, =' B ' ?<22B?;B=:' , =' AB' A,=' 2<0;' BEB @' D> ' < ' A 0' , ; 22B @6' "< ' , @' UBB 0' AB' ?<>2=' =<' <;A D' H>;' F B00' ;AB' C> ;,' < ' . ,2B ? ,' ;<' 22' ;AB' =BF2B;B=' , 0' < ' A 0' BD B ;0' U ;A' B? > ;0:' ;<' B?< 0; ;>;B' A 0' ; , :' , =' ;<' F <E =B' A ' U ;A' BU' ?, < 6' ,D< ' A,=' HBB ' 2<0; V <;A D' ?<>2=' HB' = ,U ' < ' ;AB ?B6' ,;,2< ,:' = 0; ,?;B=' H@' >?AB;80' =B < 0; ,; < ' < ' ;0' UB0;B ' 2, :' = =' <;' =<' ,0' >?A' ,0' DA;' A,EB' HBB ' BWFB?;B=' ' ;0' <U ' =B B ?B6' AB' C> ;,' U,0' ?2 B=' ;<' ,E<> ' ;AB' B F2<@ B ;' < ' M>B2B;B0' , = , =' ;AB' D, 0< D' < ' " D>B ,0:' ;AB B' UB B' ,;' ;A 0' ; B' ;2 B' . ,2, 0' H,;,2 < :' < B' H,;;,2 < ' < ' ;AB' < B=B ,; < ' < ' ;AB' A B' I & ,2=B? ' B>00 ?AU, RH> DJ:' < B' H,;;,2 < ' B,?A' < ';AB' " B ?A' 4;A' , =' ;A V <;' < B' ;A, ' : ' H,@< B;0' ' ,226' BB' B;> 0' < ' ;AB' @' < ' F, ' < ' BF;6' P: 56

T' "< ' ;A 0' ?< B0F< =B ?B' 0BB' ;AB' FFB = ?B0' <06' P' , =' O P' ' /*(' * '9- 20(

5S (') * #' #) # ' (#) O

;AB' B, ' < ' ;6' @ 8O , @6' (, ? ,' < ??B' A,=' ;AB' =BF2B;B=' ;,2 , ' = E 0 < ' < ' ;AB' 0 BDB' ?< FO' ' < ;' < ' A G < B' < ' ;AB' H D,= B 0:' ;AB' +<2B' 1 2<0BU ;R:' U,O' ' ?< , =' ;A,;' =,@:' %B??A ' HB D' ' A<0F ;,26' A 0' 0 ,22' < ?B:' UA ?A' E, 2@' HB2 BEB=' ;0B2 ' ?<EB B=' < ' ,;;,? ' H@' ;6' @ 8O ?< F0:' A,=' BF;' <' 2<< <>;' ;<' ;AB' B, :' HB D' UA<22@' ;B ;' < ' U,;?A D' ;AB' D, 0< 6' ;' U,O' 0> F 0B=' H@' ;AB' F, 0A' ?<2> :' ?>;' ;<' ;U<' A,2EB0:' , =' <>;B=6' (, ? ,' < =?' B ;B B=' ;AB' 1 B ?,=,2' ' ; > FA' U ;A' A O' ?< E<@:' , =' ;6' @ ' 0;' 2B, ;' UA,;' A,=' <??> B=' UAB ' AB' 0,U' ;AB' H < B ' B , ;O' < ' ;AB' ;,2 , O' F<> D' ;<' ;AB' B, ' < ' A O' <U ' 2 B' ,;' "< B22O6

A,;' DA;' (B < ,' U,O' BB' < ' B B BO' < ' ;O' 0<>;AB ' , =' B,0;B ' 0 =BO:' , =' 2E, BR' ?< > ?,;B=' BB2@' U ;A' <E ,8O' , =' 2, <08O' BD>2, 0:' UA<' A,=' < ?B=' ' ;AB' & B0;FA,2 , ' = E 0 < ' , =' ?< FB22B=' ;' ;<' ?< ?B ; ,;B' ' 1 < N> ?A' , =' ;AB' ?, F' H@' ;AB' D B,;' F, ' B, ' , ,' AB' D, 0< ' ?<??>F B=' ;AB' > B=' ?< EB ;' < ' , ' * , B2' H@' ;AB' (,22 D, :' , =' F2,?B=' ,' 0; < D' F, ;@' ' ;AB' AB ;,DB' < ' ;AB' FB, ' < ') >B0; ,' B < ,' =B' 2<O' DB2B06' ;' ,20<' =B0; <@B=' ,22' ;AB' ,=E, ?B=' ; B ?AB0' < ' ;AB' 02<FBO' < ' 1 < N> ?A6' ' ;AB' BW;' < D:' A<UBEB :' ;' HBD, ' ;<' ,FF B? ,;B' ;AB' ,?;' ;A,;' ;AB' 0 BDB' A,=' <;' HBB ' , 0B=6' ;6' @ ' 0B ;' H,? ' . B = B 8O = E 0 < ' ;<' BN< ' ;AB' & B0;FA,2 , 0:' , =' U ;A' ;AB ' ;AB' U B? 0' < ' %???A 8O' <>;B=' H,;;,2 < 06' B' ,==B=' ;<' ;AB' < ?B' > =B ' . B = B ' A,2 ' + <8O' ;,2 , ' = E 0 < V 0 W' B0A' H,;;,2 < 06' & ;A' ;AB0B' B < ?BY B ;O' ;AB' <2=' 0 BDB 2 BO' ?<>2=' HB' B<??>F B=:' , =' ;AB' F, , =O' K &B B' < ?B=' H,? ' < ' ;AB' F< ;O' <>;0 =B' ;AB' U,22O' UA ?A' ;AB@' A,=' B<??>F B=' < ' ;AB' DA;' < ' BF;B HB ' 6

$@' 0B = D' ,U,@' 0>?A' ,' 2, DB' F <F< ; < ' < ' ;AB' P: ' B ' ;A,;' AB' A,=' ?< ?B ; ,;B=' < ' H,;;2B' < ' ;AB' F BE <>0' =,@:' ;6' @ ' 2B ;' A 0B2 ' < 2@' 0< B' : ' B ' < ' ,' DB B,2' ,?; < ' U ;A' $2, B:' ' ;AB' 2,;;B ' 0A<>2=' B0<2EB' ;<' DA;6' $>;' ;AB' F, 0A' DB B,2:' HB D' U ;A<>;' (, ? ,' < =B8O = E 0 < :' A,=' ,20<' < < B' ;A, ' : ' B ' ' 2 B6') <;' < 2@' = =' AB' B >0B' ;<' ,=E, ?B:' H>;' UAB ' ;6' @ :' =B;B B=' ;<' DA;' ,;' ,22' ?<0;0:' , ?AB=' ,D, 0;' A ' U ;A' < B 0 EB' ;B ; < 0:' AB' A,0; 2@' B; B,;B=' ,O' , ' ,O' <0;,2 ?A:' ;U<' , ?AB0' ;<' ;AB' B, 6' AB B' AB' H < B' >F' A O' , @:' UA ?A' A,=' BWA,>0;B=' ,22' ;O' F <E 0 < 06' ;6' @ ' = =' ;AB' 0, B' , =' < ' ;AB' 0, B' B,0< 07' A O' B ' A,=' ;<

= 0FB 0B' ' < =B ' ;<' 2 EB6' B' 0,@0' ' A 0' B < 0' ;A,;' ' $2, B' A,=' 0A<U ' ,' H<2=' < ;' ,D, 0;' A :' , =' < ?B=' A ' ;<' BBF' ;AB' ?<EB D' , @' ?< ?B ; ,;B=' < ' ;U<' < B' =,@0:' ;AB' 0 BDB' U<>2=' A,EB' A,=' ;<' HB' , 0B=6' "< ' ;AB' ?<EB D' , @' A,=' ,=E, ?B=',D, 0;' ;AB' F, , =0' < ' BF;B HB ' ' U ;A' < 2@' ;U<' =,@0B' ,; < 0:' ;' A,=' BWA,>0;B=' ;0' 0;< B0:' , =' B,;B ' >F' ;AB' ?<> ; @ 0 =B6' ' ;AB' <> ;A' ;' U<>2=' A,EB' A,=' ;<' B; B:' < ' ;<' H B,' >F' ;<' 0 ,22' ,?; < 0:' 2B,E D' ;AB' 0 BDB ?< F0' > Y F <;B?;B=6' ;6' @ '=<>H;B=' UAB;AB ' ;AB' B; B,;' U<>2=' A,EB' ?B,0B=' HB < B' " D>B ,0' U,0' B,?AB=6' $>;' ;' 0' < B' F <H,H2B' ;A,;' AB' U<>2=' A,EB' B B2@' ,22B ' H,? ' ;<' N< ' .B = B :' , =' ;<' 2 EB' < ' 0< B' =,@0' < ' ;AB' =BF<;0' < ' +< ;' 1 ,@<' , =' , ,6' B' ?<>2=' A,EB' < B B=' H,;;2B' ,D, ' > =B ' ;AB' U,220' < ' (B < ,:' U ;A' ,22' A 0' < ?B0' > ;B=6' $2, B' DA;' A,EB' D<;' ;<' ?2<0B' ;<>?A' U ;A' 2E, BR:' , =' A,EB' ;A <U ' UA,;' ?< E<@0' AB' F2B,0B=' ;<' ;AB' ;<U ' 7 H>;' ,0' 2< D' ,0' ;6' @ ' , =' .B = B ' U ;A' : ' B ' 2,@' <FF<0 ;B' A :' AB' ?<>2=' <;' A,EB' 0 B=' , @' < B6' AB' 0 ;>,; < :' ' 0A< ;:' U<>2=' A,EB' HBB ' ;A,;' UA ?A' <??> B=' ' "BH >, @' ' > =B ' ;AB' U,220' < ' $,=,N<R:' UAB ' 1 < ; B ' ,?B=' 1 B = R,H,2:' , =' U<>2=' F <H,H2@' A,EB' B =B=' ' ;AB' 0, B' ,0A < :' H@' ;AB' " B ?A' ,;;,? D' , =' = E D' < ' ;AB' B2 BE D' , @6' $2, B:' ;AB :' ,@' HB' H2, B=' 0< BUA,;' < ' A 0' BW?B00 EB' ?,>; < ' ' D E D' U,@' 0<' ,F =2@' HB < B' ;6' @ 80' ,=E, ?B6' H>;' ' UB' B B HB ' ;AB' M>,2 ;@' < ' A 0' ; <<F0' , =' ;AB' BE ;,H2B' B0>2;' < ' ,' H,;;2B:' ;' 0' A, =' ;<' ?B 0> B' A ' <EB >?A6

1 B, UA 2B' (, ? ,' < =B:' UA<0B' <EB B ;0' UB B' <0;' A,FF@' , =' ,= < ;:' B < ?B=' ;AB' D, 0< ' < ' (B < ,' >F' ;<' ;0' < D ,2' 0; B D;A' < ' : ' H,@< B;0:' H@' , D' <EB ' ;<' 2E, BR' <> ' UA<2B' H,;;,2 < 0' , =' 0< B' F ? B=' ?< F, B0' < ' <;AB ' ?< F0:' , =' F BF, B=' ;<' 2B,EB' ;AB' ;<U ' U ;A' ;AB' B0;' < ' A 0' = E 0 < ' , =' ;AB' E,0;' = <EB' < ' >2B0:' UA<0B' H> =B ' A,=' HBB ' = 0?A, DB=' ;<' ;AB' ,D,R B06' ' AB' A,=' =B= ?,;B=' A 0' UA<2B' < ?B' ;<' 0; B D;AY B D' ;AB' D, 0< :' ;AB' ,== ; < ,2' ; <<F0' U<>2=' A,EB' B,;B ' >F' ' ,' BU' =,@0' ,22' ;AB' F <E 0 < 0' ;A,;' ;AB' ?< E<@' A,=' H <>DA;' ' 6

' AB' B < ?B B ;0' 2B ;' HBA =' A@' (, ? ,' < =B' ?< 0 0;B=' < ' ;U<' H,;;,2 < 0' < ' $,R,' I< B' < ' B= D80' <2=' (, ,=, ' BD B ;0J:' U ;A' : P ' H,@< B;0:' ;U<' ,;,2, ' ;B ? <0:8' 0;' , =' =' < ' ,2, :' U ;A' 4 ' H,@< B;0:' , =' 0B2B?;' ?< F, B0' < ' 0;' < ' (, ,=,' I 2 HB ,J:' =' < ' . ?A:' , =' . <2> ' ;, <0' =B' , ,D< ,V ' ,22' ,FF, B ;2@' ,H<>;' :4 4' B 6

??< = D2@ AB 0; , ;B= < , ; ;U< ,6 6 < BF;B HB O U ;A 0< B : B :H@ ;AB >F2, =F , ;A ;2 , ;2B, =0F , 0; ;AB AB ; , DB < %<0 DB2B0G ;6 @ A , =N>0 ; F2, ?B= + <80 ; <<F0 < ;AB ?<EB D , @ ; <D> , = ;AB AB DA;0 ; < ;AB 0<>;A B , 0; < (B < , : H>; (, ? , < =B: U , B= H@ ;AB FB, 0 ;0 < ;AB BW, ?; F<0 ; < : 02 FFB= HB;UBB ;AB F<0;0 , = D<; < ; < <0; , 2 ?A U ;A , 2<00 < < < 8B ;A , ;@ B

$B < B AB ?<>2= ?< 0 =B A 0 F<0 ; < 0, B: . B = B A , = ; <?< F2B;B ;AB 2 B0 < EB0; B ;G ;A 0 AB = = < BF;B HB H@ = E D < ;AB ;B B= , ;B F<0;0 UA ?A 2E, BR A , = ;A <U <>; < ;AB , F>?A AB DA;0: ; < 2 ;AB ;<U U ;A ;AB D, 0< ;AB AB ; , DB <) >B0; , B < , =B 2<0 DB2B0G 1 , RR>?AB22 80 H D, =B 0;< B= ;AB AB ; , DB ;0B2 < ;AB <22<U D = , @: U ;A , 2<00 < , H<>; B DA;@ B : , = , 00, ? B= ;AB D 8B, ;B F, ; < ;AB D, 0< 6 ;A , ; 0, B = , @: A<UBEB : ;AB " B ?A 0> B B= , 0 , 22 = 0, 0; B , <;AB F, ; < ;AB B E < 06 (B B , 2 C<H, : U2 < A, = HBB 0B ; U ;A ;A BB H, ;Y ; , 2 < 0 ; <?2B, ;AB <, = ; <" D>B , 0 < ;AB H, =0 < 2, , 0 , = <E , : U , 0 HB, ;B , = 02, , ; , (BD< <H@ ;A<0B ?A B 06 $>; ;AB M>B2B; B0 , ;B U, =0 B; B= ; <; AB <> ; , 0: , = ;AB <, = HB?, B ;B ; ;B ;2@ F, 00, H2B: , ; 2B, 0; < 2, DB H<= B0 < B 6

; U , 0 <; ; 22 BF;B HB : A<UBEB : ;A , ; . B = B , ?<

AB ; , H2B < F6 4 < ;B?AB80 E<26 E 0BB 0 ; < B ? B= ; D ;AB B EB , K ;B ? < 8 ; < (, ? , G ;A 0 A, = ?< B < >D6 4: , 0 =B0? HB= < F6 6 ;2 B <;AB A, = ;AB ?< F, @ < . <2> ; , B0 =B , , D< , 0A<>2= HB ? B= ;B= ; < A 6

8 ;6 @ ;B22 0 , 0;< @ ; < ;AB B B?; ;A , ; AB A, = F2, ?B= 1 , RR>?AB22 80 6H D, =B < + <80 = E 0 < , H>0A HBA = ;AB A 22 < + , 2, > ; < ;B ?BF; (, ? , < =B: , = ;A , ; ;AB F, , =0 U<>2= A, EB , ?AB= DA; ; < ;AB ; , F < BF;6 : ;AB ; , 2 , 0 A, = <; HBB 0;>F = B <>DA ; < 0<> = ;AB 2% 3 , ; = , U : , = 0< U, ;AB B B @ < ;AB BW 0;B ?B6 $>; ;AB F, 0A , ??<> ;0 < 1 , 2 , = 2, <0 , B M> ;B = B B ; I0BB ;B?AB: E 6 44J 7 ;AB@ , B ; < ;AB B B?; ;A , ; (, ? , < =B A, = ;B =B= ; < 0; , ; " . : (E < ;AB ;A =: H>; : AB, D D < ;AB 0 =B < + , 2, >: =B B B= A 0 BW ; , = ;<< , <;AB <, =6 AB U, 0 0; , ; D , ; 4 < <8??2<? , ; DA; < ;AB ;A =: AB ?, <; A, EB HBB U, B= H@ ;AB < D H>D2B0 , ; O <8??2<? < ;AB F BE <>0 < D6 BB ;6 @ : F6 O: , =) , F B : 6 O : < ;AB " B ?A 0;< @: UA ?A ;AB 2, ; ;B , B0 <EB UA<2B < ;AB < B 6 $B2 , 0 , = . , ?, > =< <; D EB ;AB ; , 2B: ;A<>DA ;AB@ A, EB , >22 , , ; <> < ;AB B0?, FB < (, ? , < =B6

B ?B=' ;AB' ,?;>,2' 0 BDB:' , ='H,=B' A 0' H,;;B B0' <FB ' < ?B' < B' >F< ' (B < ,6' AB' B2BEB ' =,@0' < ' B0F ;B' 0 ?B' $2, B' ;B Y >F;B=' ;AB' H< H, = B ;' < ' BF;B HB ' ' A,=' HBB ' E,2>,H2B' ;<' ;AB' D, 0< :' UA<' A,=' ??2B, B=' ,U,@' ;AB' =BH 0' < ' ;AB' <<;' < ' ;AB' H B,?AB0:' BF2,?B=' ;2 B' =, ,DB=' , ; 22B @' < ' ;AB' < ;' < ' ,;;,? :' , =' ;A <U ' >F' ;B < ' =B B ?B0' HBA =' ;AB' 0A,;;B B=' F, ;0' < ' ;AB' U,226' AB@' A,=' ,20<' =B0; <@B=' ,22' ;AB' ,=E, ?B=' ; B ?AB0' < ' ;AB' HB0 BDB 0:' UA ?A' A,=' ;<' HB' B?< 0; >?;B=' ,;' >?A' ?<0;' < ' 2 B6' ' <> ' =,@0' . B = B ' A,=' B?<EB B=' <0;' < ' ;AB' 2<0;' D <> =:' UAB ' AB' U,0' 0> F 0B=' H@' ,' E D< <>0' 0,22@' < ' ;AB' D,;B' < ' , ' +B= <7' ;AB' D, 0< :' =,0A D' <>;' ,;' ;A BB' 8 0;< B=' ;AB' ;A BB' B, B0;' H B,?A D' H,;;B B0:' 0F B=' ;AB ' D> 0:' , =' 22B=' ' ,22' ;AB' ; B ?AB0' UA ?A' UB B' ,=E, ? D' ;<U, =0' ;AB' <<;' < ' ;AB' U,2206' "<> ' =,@08' U< ' U,0' ;A>0' > =< B' ' ,' A<> :' , =' ;' U,0' < 2@' < ' BF;B HB ' 5' ;A,;' . B = B ' A,=' B?< 0; >?;B=' A 0' U< 0:' , =' F>0AB=' < U, =' 0<' , ' ;<U, =0' A 0' <HNB?; EB' ;A,;' AB' ?< 0 =B B=' , ' ,00,>2;' F<600 H2B6' B' ;AB ' HBDDB=' ;6' @ ' ;<' 2B =' A ' ,' H D,=B' < ' B0A' ; <<F0:' F2B,= D' ;A,;' ;AB' 0 BDB ?< F0' U,0' <U' 0<' UB, ' ' > HB 0:' , =' 0< =B < ,2 RB=' H@' ;0' 2<00B0:' ;A,;' AB' = =' <;' ?< 0 =B ' ;A,;' ;AB' B ' U<>2=' =<' ;AB 0B2EB0' N>0; ?B' ,;' ,' 0;< 6' AB' 2<00B0' < ' < ?B 0' A,=' HBB ' B, >26' < B' H,;;,2 < ' U,0' ?< , =B=' H@' ,' 2 B>;B , ;:' , <;AB ' A,=' HBB ' B=>?B=' ;<' ;@' B ' 7' =B0B ; < ' U,0' , F, ;' , < D' 0BEB ,2' < ' ;AB' < B D ' ?< F06' ' O: ' , ; @ ' < ' ;AB' " B ?A:' &B0;FA,2 , ' , =' ;,2 , ' = E 0 < 0' 2B00' ;A, ' P: ' <U' B , B=6' <' , ' ,0' B B' 0 BDB? , ;' UB ;:' ,0' AB' BWF2, B=' ;<' ;6' @ :' K' ;AB' , , ' DA;' HB' ?< 0 =B B=' , ;' , ' B =6' & B' A,EB' ,=B' <> ' 2, DB' F ,?; ?,H2B' H B,?AB0:' B,?A' < ' ;AB ' 0> ? B ;' ;<' B=>?B' ;AB' ;<U 6' $>;' ;AB' ; <<F0' ?, <;' HB' ; >0;B=68' ;6' @ ' B >0B=' ;<' 2B =' ,' , ' < ' ;AB' ,00,>2;:' U ; D' U ;A' F<2 ;B' < @' ;A,;' K' BEB @' DB B ,2' A,0' A 0' <U ' ;,0 6' @<> 0' 0' ;<' ;, B' (B < ,' U ;A' ;AB' B0<> ?B0' F2,?B=' ,;' @<> ' = 0F<0,2' H@' ;AB' D<EB B ;' < ' ;A,;' <HNB?;:' , =' ;AB' < ?B 0' , B=' H@' ;AB' D<EB B ;' ;<' ?< =>?;' ;AB' 0 BDB68' ' B' ,==B=' ;A,;' AB' ?< 0 =B B=:' < ' ;0' F,0;

K' . B = B ' = =' <;' BW,DDB ,;B' 6 0BB' FFB = W' <6 ' ,;' B =' < ' ;A 0' E<2> B:' 0A<U D' ;A,;' A 0' ;A BB' = E 0 < 0' A,=' 2<0;' : P ' B ' <>;' < ' O: OO' H@' BF;B HB ' 6

^ BB' ;AB' ,? =' ?< B0F< =B ?B' HB;UBB ' ;6' @ ' , =' . B = B ' ' FFB Y = ?B0' <06' 4 :' O P' < ' $B2 ,0:' E<26' 6

5S . # 22 * # 22S ' % S #S $ # # S 04

?< =>?;:S ;A, ;S ;ABS < ,2BS < S ;ABS 0 BDB ?< F0S U,0S , ;AB S D<<=S ;A, S H,=6 BS 0A<>2=S <;:S ;AB B < B:S,22<US ;ABS ?<EB DS, @S;<S N< S ;ABS,00,>2;7 H>;S ABS U<>2=S 2B =S ;ABS UA<2BS < S + <80= E 0 < S ;<S ;, BS ?A, DBS < S 1 < N> ?AS, =S ;ABS ?, F0:S => DS ;ABS 0;< :S , =S U<>2=S , BS ,S =B < 0; ,; < S ,D, 0;S ;ABS 1 B ?,=,2:S ;<S = 0; ,?;S ;ABS B B @S < S ;ABS H B,?AB06 & ;AS ;A 0S . B = B S A,=S ;<S HBS ?< ;B ;:S , =:S , ;B S , DS ;U<S ,2S F <;B0;0:S ?< ?B ; ,;B=S ,22S A 0S H D,=B0S 0,EBS ;A<0BS < S ;ABS &B0;FA,2 , S = _ 0 < :S , =S ?< F<0B=S U ;AS ;AB S <> S ?<2> 0:S , <> ; DS ;<S 0< BS : S B :S = B?; DS< BS ,D, 0;S B,?AS < S ;ABS <> S H B,?AB06 A,;S 0B ;S ,D, 0;S ;ABS F2,; < S < S , S 0;<H,2S U,0S ,S B BS=B < 0; ,; < S < S S B :S H>;S ;ABS <;AB S ;A BBS UB BS AB,E@S ,00B06 ;ABS ;,2 , 0S UB ;S ,D, 0;S , ;,S %>? ,:S ;ABS " B ?AS H D,=BS ,D, 0;S ;ABS 0<>;AB S H B,?AS S ;ABS K B=<>H;S < S ;ABS (B , 0:8S ;ABS $B DS ; <<F0S ,D, 0;S ;ABS < ;AB S < B6S S 0BF, ,;BS =B < 0; ,; < S U,0S ,=BS ,D, 0;S ;ABS ,2E, @S < ;:S UA<0BS > 0>H=>B=S BS 0; 22S 2, B=S ;ABS H B,?AB0:S S ;ABS A<FBS ;A, ;S ;0S =B B =B S DA;S HBS F BEB ;B=S < S ;B B DS S ;ABS , S 0; >DD2B6

2E, BR:S UA<S A,=S <;B=S ;ABS " B ?AS ?<2> 0S , ?A DS < S ,22S M>, ;B 0S ;<S ;, BS 0AB2;B :S HB < BS ;ABS ,00,>2;:S S ;ABS ; B ?AB0S < S ;ABS 02<FB0S < S 1 < N> ?AS, =S S < ;S < S +B= B;:S A,=S , S U, DS < S UA,;S U,0S ?< D:S, =S A,=S =< BS A 0S HB0;S ;<S F <E =BS ,D, 0;S ;ABS =, DB 6S ABS 2B00S F< ;, ;S F, ;0S < S ;ABS B ?B ;BS A,=S HBB S F>;S 8S ?A, DBS < S ;ABS ? ; RB 0S < S ;ABS K >0,=B:8S , =S ;ABS F ? B=S ?< F, B0S < S BEB @S BD B ;S A,=S HBB S ;<2=S < S ;<S ;ABS H B,?AB06 ABS # D2 0A , :S ,2FAS 1, 0A,22:S U,0S S ?AB DBS < S ;ABS ?> ;, S < S , ;,S %>? ,:S & 22 , S),0A:S ;ABS F, 0A 0AS ?<2< B2S < S ' 2;< ,:S ?< , =B=S ,;S ;ABS ;U<S H B,?AB0S > =B S %,S (< B22,6 $ D,= B S "<> ,0:S ;ABS 0B?< = ?< , =S < S ;ABS D, 0< :S A,=S DB B ,2S 0>FB E 0 < S < S ;ABS =B B ?B07 ABS A,=S F BE <>02@S ;, B S ?A, DBS < S 1 < N> ?AS => DS ;ABS D B,;S ,00,>2;S S >D>0;6 #EB @;A DS A,=S HBB S =< BS ;<S F BF, BS ,S 0B?< =S 2 BS < S B0 0;, ?BS HBA =S ;ABS H B,?AB07 H, ?,=B0S A,=S HBB S B B?;B=:S A<>0B0S 2<<FA<2B=:S , =S ,S D B,;S , @S , 0 B S = 0F<0B=S < S << 0S , =S ?A> ?AS ;<UB 0:S UA ?AS 2<< B=S =<U S < S ;ABS B, 0 =BS < S ;ABS D,F0S S ;ABS U,226

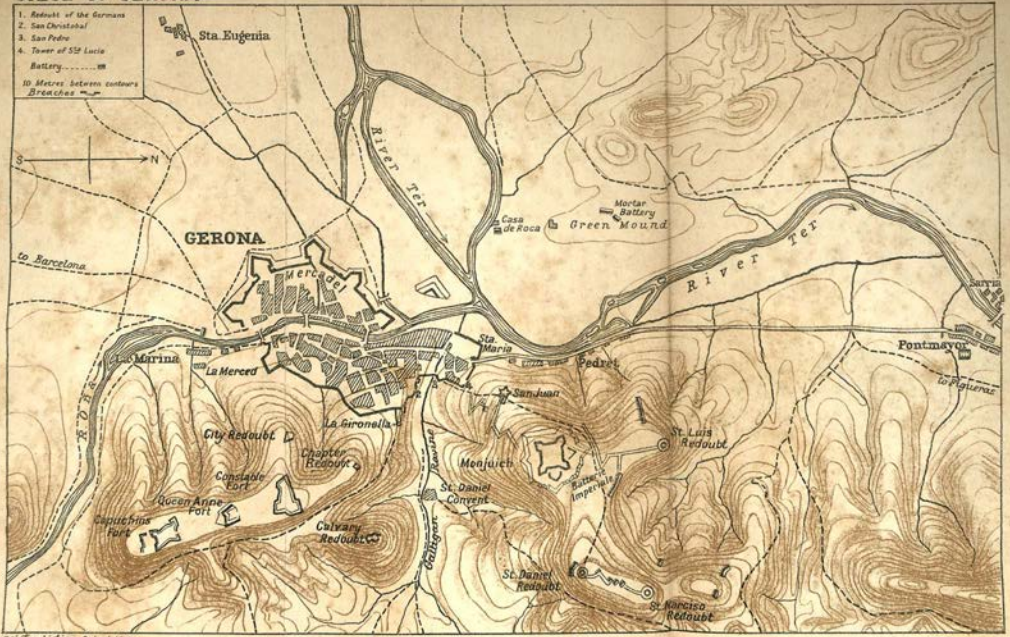
;S <> S <8?2<? S S ;ABS, ;B << S < S BF;B HB S 5S ;ABS ;A BBS ?<2> 0S =B0; B=S < S ;ABS < ;AB S H B,?AB0S =B0?B =B=S < S 1 < N> ?AS < S ;ABS 0 =BS < S , S *, B2:S ? <00B=S ;ABS (,22 D, :S, =

2"' E &' <>' ' /&7 (' A' %' H?

F2> DB=' ;<';AB' A<22<U' ,;' ;AB' <<;' <' ;AB' ' B=<>H;' <' ;AB' (B , 068' ;' ;AB' 0, B' < B ;' ;AB' <> ;A' ?<2> ' 0; , ;B=' < ' ;AB' > 0' <' ;AB' ;<UB ' <' , ' C>, ' ;<' , ;; , ? ' ;AB' ?> ; , ' <' , ; ,' %>? , 6' AB' = EB 0 <' , D, 0;' ;AB' ,2E, @' <;' U,0' , =B' , ;' ;AB' 0, B' < B ;:' , =' HB, ;B ' <' ' ,' BU' >;B0:' 0<' ;A, ;' ;AB' B' <' ;A 0' E< ' U,0' <;' B>; ,2 RB=' => D' ;AB' ,00, >2;' , ??< = D' ;<' . B = B 8O' BWFB?; , ; < 6' AB' , ' ,00, >2;:' BEB Y ;AB2B00:' E,0 =B2 EB B=' U ;A' D B, ;' B B D@:' =B0F ;B' ;AB' 2, D' B6' ;' ;AB' ;U<' F< ;0' < ' , ;; , ? ' > =B ' %, ' (< B22, ' ;AB' 0;< B 0' ;U ?B' U< :' ? <00B=:' , =' =B0?B =B=' < ' ;AB' H B, ?A:' < ? D' ;AB ' U, @' ;<' ;AB' > B=' H, ,? 0' HBA =6' $>;' ;AB@' UB B' <U ' =<U ' H@' ;AB' ;B H2B' >0 B; @' B' < ' ;AB' A<>0B0:T' , =' ,22@' BWFB22B=' U ;A' ;AB' H, @< B;6' ;' ;AB' , ; , ' %>? , ' ?> ; , ' ;AB' ; , 2 , 0' 0?, 2B=' ;AB' H B, ?A:' H>;' EB B H <>DA;' >F' H@' , ' FB FB = ?>2, ' = <F' < ' ;UB2EB' BB;' HBA =' ; V ;AB' <<;' < ' ;AB' U, 22' ' ;A 0' M>, ;B ' ?A, ? D' ;<' HB' >?A' A DAB ' ;A, ' ;AB' 2BEB2' < ' ;AB' 0; BB;' HB2<U6' AB@' AB2=' ;AB' ? B0;' < ' ;AB' H B, ?A' < ' 0< B' ; B:' H>;' UB B' ,22@' U< 0;B=' ' ,' 2< D' , =' > <>0' BW?A, DB' < ' B' U ;A' ;AB' F, , =0' < ' ;AB' << 0' , =' ?A> ?AB0' HB < B' ;AB :' , =' B?< 2B=6' AB' BU' 0> E E D' < ?B 0' ,22 B=' ;AB' 0;< B 0:' , =' H <>DA;' ;AB ' >F' < ' ,' 0B?< =' ,00, >2;:' H>;' , ;' ;AB' B =' < ' ;U<' A<> 0' < ' A, =' DA; D' ,22' .B B ?< 0; , B=' ;<' B; B' ;<' ;AB ' ; B ?AB06' AB@' A, =' 2<0;' P O' 22B=' , =' U<> =B=:' ??>= D' ;A BB' ?<2< B20' I;AB' < 2@' ;A BB' 0> E E D' ' ;AB' EA<2B' < ' .B = B 8O' ?< F0J' , =' ;A ;@' <;AB ' < ?B 06' AB' F, 0A' 2<00' A, =' HBB ' :' , < D' ;AB ' <2< B2' 1 , 0A, 22:' UA<' U, 0' < ; , 22@' U<> =B=' , ;' A 0' F<0;' < ' ;AB' , ; , ' %>? , ' < ;6

.B = B ' , ??>0B=' A 0' ; <<F0' < ' ?<U, = ?B:' UA ?A' 0BB 0' ;<' A, EB' HBB ' > N>0;6' ;6' @ ' U <;B' ;<' ;AB' 1 0;B ' < ' & , ' ;<' BWF B00' A 0' <F < ' ;A, ;' A 0' 0>H< = , ;B' U, 0' , D' , ' BW?>0B' ;<' ?<EB ' A 0' <U ' B < :' ' N>=D D' ;A, ;' , ' ;<U ' >0;' , 22' B B2@' HB?, >0B' ;AB B' UB B' 2, DB' H B, ?AB0' ' ;0' U, 2206' K' AB' ?<2> 0' 0;<FFB=' < ' B;@' >;B0' < ' ;AB' H B, ?AB0' > =B ' , 0' AB, E@' , ' B' , 0' A, 0' BEB ' HBB ' 0BB 6' AB B' E, 0' 0< B' = 0< =B ' , ;' ;AB' B =:' H>;' ;A, ;' 0' <;' , 0;< 0A D' ' E BU' < ' ;AB' AB, E@' 2<00' 0> B B=' HB < B' ;AB

' K' ' F, , ;' M>B' < ' , ' B F2<@B' 2, ' B00<> ?B:' , 2AB> B>0B B>;' ; <F' >0 ;BB' B ' F, B=' ?, 0:' =B' = B' M>B' 2B0' ; <>FB0' 8< ;' F, 0' , ;' 2B> ' =BE< :' ?B' M>' F <=> ;' =B' N>0;B0' B?2, , ; < 0' =B' 2B> ' F, ;6' I ;6' @ ' ;<' ;AB' 1 0;B :' BF;6' O:' 56J


SIEGE OF GERONA
1. Redoubt of the Germans
2. San Christobal
3. San Pedro
4. Tower of Sta Lucia
Battery
10 Metres between contours
Breaches
Sta. Eugenia
River Ter
S
N
GERONA
Mercadel
to Barcelona
Casa de Roca
Mortar Battery
Green Mound
River Ter
Sta. Maria
Pontmayor
to Figueras
La Merced
La Mirina
San Juan
La Gironella
City Redoubt
Chapter Redoubt
Constable Fort
Queen Anne Fort
Capuchins Fort
Calvary Redoubt
Montjuich
St. Daniel Convent
Batter Imperiale
St. Luis Redoubt
St. Daniel Redoubt
St. Narciso Redoubt
SCALE
METRES

B; B, ;6' ' =<' <;' ;A ' ;A, ;' F ? B=' D B , = B 0' U<>2=' A, EB' =< B' , @' HB;;B :' , =' ' , ' ?< E ?B=' ;A, ;' ;AB' ,00, >2;' , 2B=' HB?, >0B' ;AB' <H0; , ?2BO' ;<' 0> <> ;' UB B' ;<<' D B, ;6' AB' ,?;' U, 0' ;A, ;' ;AB' F, , =0' A, =' <>DA;' U ;A' 0>?A' , = , H2B' <H0; Y , ?@:' , =' 2 , =' 0< UB22' , , DB=' ;AB ' B '=B B ?BO:' ;A, ;' ;'= =' <;' 0> ?B' ;A, ;' ;AB' H B, ?ABO' 0A<>2=' A, EB' HBB ' FB B?; 2@' F , ?; ?, H2B6' ;' ;AB' < ;AB ' ,00, >2;' ;AB' 0;< B 0' , ?; >, 22@' FB B; , ;B=' ;<' ;AB' H> 2= DO' HBA =' ;AB' D, FO' ' ;AB' > B=' U, 22:' H>;' ?<>2=' <;' DB;' > ;AB ' < U, =6 ' '0A< ;:' ;AB' A 0;< @' < ';AB' 0 BDB' < ' (B < ,' D EBO' ,' ?2B, ' ?< <H< , ; < ' < ' ;AB' <2=' 2 ; , @' , W < ' ;A, ;' <' ;<U ' 0A<>2=' BEB ' 0> B =B ' B B2@' HB?, >0B' ;' A, 0' HBB ' H B, ?AB=:' , =' N>0; BO') , F<2B< 8O' < =B ' ;A, ;' BEB @' D<EB < ' UA<' ?, F ;>Y 2, ;B=' U ;A<>;' A, E D' 0;<<=' , ;' 2B, 0;' < B' ,00, >2;' 0A<>2=' HB' 0B ;' HB < B' ,' ?<> ;' , ; , 26' ;' B >;BO' ;AB' BW?>0BO' < ' ;AB' ;<<' > B <>0' ?< , =B 0' UA<' A, EB' 0> B =B B=' B B2@' HB?, >0B' ;AB B' U, 0' ,' F , ?; ?, H2B' H B, ?A' ' ;AB ' U, 22O:' 2 B' , R' , ;' $, =, N<R'

6' ' , 22' F, 0A' DB B , 20' A, =' HBB ' , 0' U, @' , =' , 0' BO<2>;B' , 0' 1 , , <' 2E, BR:' ;AB' +B 0>2, ' & , ' U<>2=' A, EB' ; , B ' 0< B' > BWFB?; B=' ;> 06' AB' < , 2' < ';AB' =B B ?BO' < ' , , :' $> D<0:' , =' , ' BH, 0; , ' U 22' HB' <> =' ;<' HB' ;AB' 0, B' , 0' ;A, ;' < ' ;AB' =B B ?B' < ' (B < , 6

AB' B B?;' < ' ;AB' BF>20B' < ' BF;B HB ' 5' < ' ;AB' HB0 BD D' , @' U, 0' , FF, 22 D6' . B = B :' , ;B ' U ; D' ;A BB' EB < <>0' 2B;;B 0' ;<' ;AB' # FB < :' ;AB' & , ' 1 0;B :' , =' 1 , 0A, 2' >DB B, >:' ' UA ?A' AB' , ??>0B=' ;6' @ ' < ' A, E D' =B2 HB , ;B2@' 0, ? ?B=' ;AB' D<<=' < ' ;AB' 0B E ?B' ;<' A 0' FB 0< , 2' B0B ; B ;0:' =B?2, B=' A 0B2 ' E, 2 =B=6' B' ;AB ' UB ;' < T' ;<' +B F D , :' ;A<>DA' FB 00 < ' ;<' =BF, ;' U, 0' BWF B002@' =B B=' A ' H@' A 0' 0>FB < G' A 0' = E Y 0 < , 2' DB B , 20:' %B??A ' , =' 1 < <:' A, =' , 2 B, =@' F B?B=B=' A ' ;<' " , ?B6' * 0D>0;' , ;' ;AB' , 2> B' < ' ;AB' 0;< ' A, =' ;AB' 0, B' B B?;' < ' ;AB' , ' , =' 2B6' : ' B ' UB ;' ;<' ;AB' A<0F ; , 2' ' ;AB

8' AB' <;' > , ;> , 2' 0>DDB0; < ' ;A, ;' ;AB' (B , ' , =' ;, 2 , ' ; <<F0' ,@ A, EB' , 2B=' ;<' = 0F2, @' 0>?A' =B0FB , ;B' ?<> , DB' , 0' ;AB' , ; EB' " B ?A' ' ;AB' , 00, >2;' 0BB 0' ;<' HB' B >;B=' H@' ;AB ' 2<00B0:' UA ?A' UB B' A, =2@' 0 , 22B ' ' F <F< ; < 6' ' :O ' , ; EB' " B ?A' < ' ;AB' 4;A' , =' PP;A' % B' , =' =' %BDB :' ' UB B' F>;' <>;' < ' , ?; < '7' < ' :O ' $B D:' & > RH> D:' , =' ; , 2 , ' ; <<F0:' 5P6' AB' = B B ?B' ' ;AB' FB ?B ; , DB' 0' 0<' 0 , 22' ;A, ;' ;' 0' ?2B, ' ;A, ;' ;AB B' U, 0' <' D B, ;' = B B ?B' ' ?< =>?;6

^ BB' B0FB? , 22@' . B = B ' ;<' >DB B, >:' <6' :' , =' ;<' ;AB' 1 0;B :' <6' P :' < ' $B2 , 08O' FFB = ?BO6

< ; DA;' ;A , ;' <22<UB=' ;AB' ,00 , >2;:' ; 22' H@' ?;<HB ' ' ;AB' ;A BB' = E 0 < 0' < ' ;AB' 0 BDB ?< F0' > HB B=' 2 ; ;2B' < B' ;A , ' O: ' H , @< B;0 V N>0;' B <>DA' ;<' A<2=' 1 < N> ?A' , =' ;AB' ?, F0' H@' ;AB' D B , ;' =BF<;0' , ;' +<F;' 1 , @< ' , =' , ,6' AB' 0;< B' < ' , > Y ; < ' ' ;AB' F, ' A , =' HBB ' >0B=' >F' < ' ;AB' ; B B =<>0' H< H , =Y B ;' F<> B=' >F< ' ;AB' H B , ?AB0' < ' ;AB' ;A' ;<' <' ;AB' 4;A' < ' BF;B HB 6' ' BU' 0>FF2@' U , 0' U , ;B=' < ' +B F D , :' @B;' <' ; <<F0' ?<>2=' HB' =B; , ?AB=' ;<' H D' ;' < U , 8=:' < ' ;AB' M>B2B;B0' UB B' , D , ' , ?; EB:' , =' < ' BF;B HB ' ' A , =' ?, F;> B=' < '=B0; <@B=' B , ' $, 0?, , ' , ' ?< E<@' D>, =B=' H@' 0<' , @' , 0' ' B 6 ;6' @ :' 2B ;' ' 0<2B' ?A , DB' < ' ;AB' 0 BDB' H@' . B = B 80' =BF, ;> B:' ?, B' ;<' ;AB' ?< ??>0 < ' ;A , ;' ;' U , 0' >0B2B00' ;<' F <?BB=' U ;A' ;AB' , ;; , ? ' H@' B, 0' < '; B ?AB0:' H , ;; B B0:' , =' , 00 , >2;0:' , =' , 2@' 0; , ;B=' ;A , ;' AB' 0A<>2=' 0; , EB' ;AB' ;<U ' <>;:' H>;' U , 0;B' <' > ;AB ' 2 EB0' < ' , ?; EB' <FB , ; < 06' B' = BU' ' ;AB' ?<EB D' ?< F0' ??2<0B ' ;<' (B < 0 :' 0<' ;A , ;' ;' ?<>2=' ; , B' , ' F , ?; ?, 2' F , ;' ' ;AB' EB0; B ;:' F>;' ;AB' U B? 0' < ' %B??A 80' ; <<F0 V < ' UA< ' 2B00' ;A , ' : ' 0> E EB= V ;<' + <80' = E 0 < :' , =' 0B ;' ;AB'6" B ?A' H D , =B' < ' . B = B 80' <2=' = E 0 < ' ;<' D>, =' ;AB' 2 B' HB;UBB ' $, 0?, , ' , =' ;AB' " < ; B 6' A>0' ;AB' = 0; ?; < ' HB;UBB ' ;AB' 0 BDB ?< F0' , =' ;AB' ?<EB D' ; <<F0' ?B , 0B=' ;<' BW 0;:' , =' ;6' @ ' 2 , @' U ;A' 0< B' P: ' B ' ' , ' 2<<0B' ? ??2B' <> =' (B < , :' ;B ;' <;' < ' F <0B?>; D' , =E , ?B0' , D , 0;' ;AB' U , 220:' H>;' < 2@' < ' F BEB ; D' ;AB' ; <=>?; < ' < ' > ;AB ' 0>??<> 06' B' U , 0' , U , B' ;A , ;' , ?>;B' F E , ; < 0' UB B' , 2 B , =@' HB D' 0> B B=' H@' ;AB' F, , =0' (, ? ,' < =B80' ?< E<@' A , =' H <>DA;' ' <;' >?A' < B' ;A , ' B DA;' = , @08' F <E 0 < 0' < ' ;AB' : ' B ' < ' ;AB' B Y < ?B=' D, 0< ' , =' ;AB' : ' A , H ; , ;0' UA<' 0; 22' 0> E EB=6' AB B' U , 0' , ?< 0 =B , H2B' , <> ;' < ' 2<> ' 0; 22' 2B ;' ' 0;< B:' H>;' 2 ; ;2B' B20B6' B , ;:' 0 , 2;' , =' B0A:' U , 0' , 22' D< B' 0 , EB' A< 0B 2B0A:' < ' 2E , BR' A , =' N>0;' HBD> ' ;<' H>;?AB ' A 0' = , >DA;' A< 0B0' , =' ;A<0B' < ' A 0' 0 D2B' 0M> , = < ' < ' ?, E , 2 @6' AB B' U , 0' 0< B' 0 , 22' 0;< B' < ' ?A<?<2 , ;B:' ;<H , ??<:' , =' ?< BB:' H>;' U B' , =' , D>, = B ;B' A , =' > ' <>;:' 0<' A , =' 0 , 2;:' < 2:' ?B:' , =V UA , ;' U , 0' <0;' 0B <>0' U ;A' , >;> ' , =' U ;B ' , FF <, ?A D V U<<=' , =' ?A , ?<, 26' 22' ;AB' ; HB 0' < ' ;AB' A<>0B0' =B0; <@B=' H@' ;AB' H< H , = B ;' A , =' HBB ' F < F;2@' >0B=' >F:' B ;AB ' < ' < ; ?, ; < ' < ' < ' ?<< D

' AB' EB @' ;B B0; D' 2 0;' < ' ;AB' F ?B0' < '?< <= ; B0' , ;' ;AB' ?< B ?BY B ;' , =' ;AB' B =' < ' ;AB' 0 BDB:' = , U ' >F' H@' * 6' > R:' < B' < ' ;AB' (B < ,

F, ;0' < ' ;AB' 2 B' < ' EB0; B ;:' 0<' ,0' ;<' = ,U' < ' ;6' @ 80'
,;;B ; < ' < ' ;AB' ? >? ,2' F< ;6' B' ; >0;B=' ;<' 0B? B?@' , ='
0>==B ' ,?; < :' A,E D' 0>??BB=B=' ' ?< ?B ; ,; D' A 0' , @'
U ;A<>;' HB D' = 0?<EB B=' H@' ;AB' " B ?A:' UA<' ;A<>DA;' A ' 0; 22'
, ' ,U,@' HB@< =' <0;,2 ?A6' A>0' ;' ?, B' ;<' F,00' ;A,;' ;A<>DA'
8* < B22' 0; >? ' 0A, F2@' :' =B B,;B=' , ' ;,2 , ' BD B ;' B, '
,0;B22, :' , =' , <;AB ' ;A BB' 2B0' > ;AB ' < :' , =' B,?AB=' ;AB'
< 0;,H2B' < ;' U ;A' ;AB' AB,=' < ' ;AB' ?< E<@:' @B;' ;AB' B0;' < '
+ <80' = E 0 < ' , =' F, ;' < ' <>A, 80' ?< ?B ; ,;B=' >F< ' A 0'
2, ' , =' B, :' HB?,>0B' ;AB@' UB B' <;' = ,U ' < ' H@' ,2, 0' '
<;AB ' M>, ;B 06' AB@' H < B' ' HB;UBB ' 8* < B22' , =' A 0'
0>FF< ;0:' ?,F;> B=' ,22' ;AB' ?< E<@' 0,EB' 4 ' >2B0:' , =' =B0; <@B='
;AB' 2B,= D' BD B ;' < ' & F B 80' ?<2> :' 0A<<; D' ,20<:'
,??< = D' ;<' ;AB' F, 0A' BF< ;0:' , @' 0?< B0' < ' ;AB' > , B='
FB,0, ;0' UA<' UB B' = E D' ;AB' HB,0;0' < ' H> =B ' ' H<>;' 4 '
< ' & F B 80' B ' UB B' ;, B ' F 0< B 0:' ,H<>;' : ' 22B=' < '
U<> =B=:' < ' 2 ;;2B' M>, ;B ' U,0' D EB 6' AB' B , ;' B?< 2B='
>F< ' $2, B:' UA<' B22' H,? ';<' <0;,2 ?A' BW;' =,@:' BF;B HB ' 4:'
U ;A<>;' < B D' ;<' DA;6' AB' , <> ;' < ' <<=' UA ?A' B,?AB='
;AB' D, 0< ' U,0' ; 2 D:' , =' 2E, BR' =B?2, B=' ;A,;' AB' A,=' <'
BB=' < ' ;AB' ,== ; < ,2' <>;A0' < ' 8* < B228' <> ' H,;;,2 < 0:'
, =' B >0B=' ;<' ,= ;' ;AB ' ;<' ;AB' ? ;@6' AB@' 2,@' B ?, FB='
> =B ' ;AB' ,F>?A ' < ;' < ' 0< B' =,@0:' U, ; D' < ' , '<FF< Y
;> ;@' ;<' B0?,FB6

;B 'A,E D' ;A>0' U B? B=' $2, B80' 0B?< =' ,;;B F;' ;<' 0>??<> '
(B < ,:' , =' = EB 'A ' < ';AB' B DAH<> A<<=:' ;6' @ 'HB;<< '
A 0B2 ';<' +B F D , :' ' < =B :' ,0' AB' BWF2, B=' ;<' ;AB' 1 0;B '
< '& , ' :' ;<' A> @' >F' F <E 0 < 0' ;<' ;AB' , @' ,;' ;AB' < ;:' , ='
;<' ?< FB2' ;AB' < ?B 0' ,;' ;AB' H,0B' ;<' 0B =' < U, =' 0< B' : '
< 'O: '?< E,2B0?B ;0' ;' ;<' , ?A:' UA<0B' 0B E ?B0' A,=' HBB 'FB Y
0 0;B ;2@' =B B=' A ' EB=' ;AB B' AB' AB, =' ;A,;' >DB B,>:'
UA<0B' D<>;' A,=' 2< D' = 0,FFB, B=:' U,0' FB B?;2@' ;' ;<' ;, B' ;AB'
B2=:' , =' ?<>2=' A,EB' =< B' 0<' 2< D' HB < B' ' AB' A,=' <;' F BY
B B=' ;<' 0A ;' < ' ;<' <;AB ' 0A<>2=B 0' ;AB' B0F< 0 H 2 ;@' < ' ;AB'
0 BDB' < ' (B < ,6' B' U,0:' < ' ?;<HB ' :' ,;' ;AB' H,;A0' < ' 1 <2 ;D:'
K' =B0; <@ D' ;AB' DB 0' < ' A 0' ,2,=@' 8' ,0' AB' D ,EB2@' U <;B' ;<

8' BB' < B <:' :' , =' ;B?AB:' E 6 O 6
^ BB' ;6 @ ';<' ;AB' 1 0;B :' $B2 ,0:' :' FFB = W' <6 P46
' >DB B,>' ;<' ;AB' 1 0;B :' H =6:' ?;6 6

O #' " %%' "' (#) A

>DB B,>' U,0' ' BEB @' U,@' B < ' ,0' , ' < ?B ' ;<' ;6' @ 6'
' <2=' 0<2= B ' < ' < ;> B' 0B ' < ' ;AB' , 0:' AB' A,=' 2 ;;2B'
B=>?,; < ' < ' 2 ;, @' 0? B ?B7 A 0' < B' E ;>B' U,0' AB,=2< D'
?<> ,DB' < ';AB' H,;;2B B2=:'@B;' UAB ' F2,?B=' ' 0>F B B' ?< , ='
AB' < ;B ' AB0 ;,;B=:' , =' 0A<UB=' A<FB2B00' =B? 0 < 6' B' A,='
HBB ' 2>? @' B <>DA' ;<' B, ' ,' D B,;' BF>;,; < ' ,0') ,F<2B< 80'
0B?< = ?< , =' ' ;AB' <2=' ?, F, D 0' < ' ;,2@' ' 45P 46'
?B' ;AB ' AB' A,=' ,=B' A 0' < ;> B' H@' HB?< D' < B' < ';AB'
FB < 80' <0;' RB,2<>0' ;<<20' , =' 2,;;B B 06' B' U,0' B? < B='
,' H2 =' , =' B? 2B00' $< ,F, ; 0;:' B,=@' ;<' 0 ' , @;A D' < '
A 0' ,0;B :' H>;' 0F< 2;' A 0' BF>;,; < ' < ' 0 ?B ;@' H@' =B0B ; D'
A ' ,;' ;AB' 0;' <FF< ;> ;@' ' O6' B' U,0' ?2 B=' ;<' ,'
A, 0A' ;B F B;,; < ' < ';AB' 2,U0' < 'U, :' , =' B N<@B=' ,' =<>H; >2'
BF>;,; < ' < ' , ? ,2' ;BD ;@6' ! B;' AB' U,0' F < B' ;<'
= ?>2<>0' 0B2 2,>=,;< @' F <?2, ,; < 0' , =' , B0;<0:' U ;;B '
' ,' H< H,0; ?' 0; , ' UA ?A' AB' E, 2@' ,D B=' ;<' B0B H2B'
A 0' ,0;B 80' ;A> =B 0' < ';AB' D:33%' (' ? ,F0' < 'A 0' ,== B00'
;<' ;AB' ? ; RB 0' < ' (B < ,' ,@' 0B EB' ;<' = 0F2,@' A 0' ,;> ;@V
K ' A,FF@' A,H ; , ;0V U B;?AB=' E ?; 0' <2,;B=' ;<' ;AB'
?,F ?B' , =' ,= B00' < ' , H ; <>0' B ' D BB=@' < ' @<> ' H2<<=V'
B;> ' ;<' @<> ' 0B 0B0:' <FB ' @<> ' B@B0:' ?< 0 =B ' ;AB' 220' UA ?A'
0> <> =' @<>Q & ;A' UA,;' ; , ?N> 22 ;@' =<' @<> ' 2B,=B 0' 2<< '
>F< ' ;AB' D ,EB0' ? , B=' U ;A' @<> ' ?< F0B0Q B' @<>' <;'
A< < 0; >? ' ,;' ;AB0B' ?, H,20:' UA<0B' ;A' H> 0;0' <>;' ' ;AB'
=0;' < ' ;AB' A> , ' AB?,;< H:' , =' UA<'@B;' =, B' ;<' 2 ;' ;AB '
D< @' A, =0' ' F ,@B ' ;<U, =0' ;AB' ;A < B' < ' ,' (<=' < ' +B,?B'Z
AB@' ?,22' ;AB 0B2EB0' ;AB' ,F<0;2B0' < ' CB0>0' A 0;Q B H2B:'
? >B2' , =' , <>0' B Q AB' (<=' UA<' N>=DB0' ;AB' ,?; < 0'
< ' < ;,20' 0' 02<U' ;<' ?< =B :' H>;' A 0' EB DB, ?B' 0' ;B H2B66 6 6
' U, ' @<>' < ' ;AB' 2,0;' ; B:' A,H ;, ;0' < ' (B < ,:' B 2B?;'
UA 2B' @<>' 0; 22' ,@' Q ' @<>' < ?B' B' ;<' ;A <U' ,0 =B' @' >0>,2'
2= B00:' @<> ' > ' 0' BE ;,H2B6' 0A,22' HB' ;AB' 0;' ;<' D <, '
,;' ;:' H>;' ;AB' 2,U0' < 'U, ' F<0B' < ' B' ;AB' = B' B?B00 ;@6 6 6 6
' , ' 0BEB B' H>;' N>0;6' ' A,FF@' (B < ,Q ';A@' =B B =B 0' FB 0 0;'
' ;AB ' <H0; ,?@:' ;A<>' 0A,2;' FB 0A' ' H2<<=' , =' 2, B6
I D B=J' ! " #
;> ' < ';A 0' 0< ;' U,0' <;' 2 B2@' ;<' A,EB' >?A' B B?;' < ' , ,; ?0'
2 B' 2E, BR' , =' A 0' K' >0,=B 068' ' ;' 0' 0<' U < D' ;<' ?,>0B' ;AB'
=B,;A0' < ' B V ;AB@' A,=' < 2@' ;<' , 0UB V & A@' A,0' $< ,F, ;B

0B ;' A 0' 2BD < 0' ;<' F, ' Z' ' ;AB' 1, 0A,28O' 2 B' < ', D> B ;:' ;A,;' ;' 0' U < D' ;<' B0 0;' <EB UAB2 D' < ?B:' ;' 0',FF, B ;2@' ,' 0 ' HB < B' (<=' <' ', @' ,' ;<',;;B F;' ;<' =B B =' A 0' A<>0B' , =' , 2@' ,D, 0;' , @' H, = ;6' AB B' 0' >?A' <= <,0' , =' A@F<? ; ?,Z' < 0B 0B' ' 0< B' <') ,F<2B< 8O' H>22B; 0:' UAB B' AB' D <U0' ;B =B ' <' ;AB' 0B BO' <' ;AB' FB<F2B' AB' A,0' ?< M>B B=:' A>;' <;A D' ;<',FF <,?A' ;AB' ,> =B D0' < 'A 0' ?<F@ 0;6

>DB B,>' <> =' ;AB' , @' ,H<>;' (B < ,' 0A<U D' <;' < B' ;A,' : ' H,@< B;0' ;' <' ;AB' B2=V D> B 0' , =' 0,FFB 0' BW??>=B=6' AB' B ' UB B' 0 ? ' <' ;AB' 0 BDB:' , =' ;' U<>2=' 0BB ' ;A,;' ;AB' 1, 0A,Z' U,0' < ?B=:' , ;B ' 0FB?; D' ;AB' BD B ;0' , =' ?< B D' U ;A' ;AB' DB B ,20:' ;<' ,?M> BO?B' ' ;6' @ 0' =B? 0 <' ;A,;' , @' > ;AB ' ,00,>2;0' U<>2=' F <H,H2@' 2B,=' ;<' < B' BF>20B06' B' D,EB' <>;' ;A,;' AB' U,0' B0<2EB=' ;<' ?A, DB' ;AB' 0@0;B ' <' UA ?A' ;AB' <FB ,;< 0' A,=' A ;AB ;<' HBB ' ?< =>?;B=:' H>;' ;AB' ?A, DB' , <> ;B=' ;<' <;A D' < B' ;A, ' ;A,;' AB' < =B B=' ,' 02<U' H>;' 0;B,=@' H< H, = B ;' ;<' HB' BF;' >F:' , =' <??,0 < ,22@' EBWB=' ;AB' F, , =0' H@' =B < 0; ,;< 0' ,D, 0;' ;AB' < B' BWF<0B=' F< ;0' <' ;AB' U,226' ;' =<B0' <;' ,FFB, ' ;A,;' B ;AB ' < ' ;AB0B' BWFB= B ;0' A,=' ;AB' 2B,0;' B B?;' ' 0A, D' ;AB' < ,2B' < ' ;AB' D, 0< 6' ;' 0' ; >B' ;A,;' => D' ?;<HB ' , =')<EB HB ' ;AB' AB, ;0' < ';AB' (B < B0B' UB B' ?< B ? D' ;<' D <U' 0 ? :' H>;' ;A 0' U,0' 0<2B2@' ;AB' B0>2;' < ' 0;, E,;< ' , =' =U =2 D' > HB 8O6' 0' ;<' ;AB' H< H, = B ;' ;AB@' UB B' <U' A, =B B=' ;<', @', <> ;' < ' = <FF D' B7' < ' ?;<HB ' ' ;AB@' ?B2BH ,;B=' ;AB' B,0;' < ' , '), ? 0<:' ;AB ' F,;< :' H@' ,' F <?B00 < ' ,22' <> =' ;AB' ;<U :' UA ?A' U,0' > =B ' B' < ' ;AB' UA<2B' ; B' < ' ;0' F <D B00:' , =' F, I2' <',;;B ; < ' ;<' ;AB' ?,0>,2; B0' UA ?A' ;' ?<0;' ;AB 6

1B, UA 2B:' UAB ' ;AB' 0B?< =' A,2 ' < ' ?;<HB ' A,=' HBD> :' 2, B' ,=B' ;AB' ;A =' , =' 2,0;' < 'A 0' ,;;B F;0' ;<' ;A <U'0>??<> 0' ;<' (B < ,6' ;' U,0' BEB ' < B' BBH2@' ?, B=' <>;' ;A, ' ;A,;' < ' BF;B HB ' P:' < ' ;AB' , @' B F2<@B=' U,0' 2B00' > B <>06' $2, B8O' < ?B' A,=' <;' B?B EB=' , @' B < ?B B ;' ;<' , B' >F' < ' ;AB' B ' 2<0;' ' ;AB' 2,0;' , , :' ,' ,?;' ;A,;' 0BB 0' 0> F 0 D:' 0 ?B' . ,2B ? ,' <>DA;' <U' ;<' A,EB' HBB ' ,H2B' ;<' 0B =' A ' ;AB' B , =B ' < ' ;AB' BD B ;0' UA ?A' A,=' HBB ' B< D, RB=' 0 ?B' ;AB' = 0,0;B 0' < 'C> B6' $>;' ;' U<>2=' 0BB ' ;A,;' C<0B' , <:' UA<' U,0' ' ?< , =' ' ;A,;' F <E ?B:' , =' ;AB' 2<?,2' C> ;,:' ,=B' BW?>0BO' < ' B;, D' ,0' , @' B ' ,0' F<00 H2B:' , =' ?, B=' 2 ;;2B

5 .)) (#) J-
;AB B0;< ; ;2 B ; ,2 , 0 0;< B= <0; ,2 ?A: UA ?2 , U,0 =B B =B= < 2@ H@ ;0 <U A ,H ; , ;0 , =;AB 0 ,22 D, 0< < ;AB ?,0;2B6 AB F, , =0 UB B = =EB >F ;<;A,;0; < DA<2= , ;B ,2 EB2@ DA;: , = ,22 ;AB ,D,R B0 B22 ;<+ <80 A, =0 , = UB B H> ;6 ;, ?<0;< ; < 2@ ;A ;@ EB 22B= , = 0 W;@ <> U<> =B= ;AB <<=: UA ?A $2, B A,= ?<22B?;B= U ;A 0< >?A = ?>2;@: U,0 =B0; <@B= H AB B>F< ;AB F, 0A DB B ,2 D,EB >F ;AB ,;;B F;;<0>??<> (B < ,: , = U ;A= BU ;<;AB F2, < . ?A:;<; B?< B ?B ;AB 0@FAB, ;,0 < DB;; D ;<DB;AB < B < B ?< E<@6 ;U,0 <;=B0; B= ;< HB < , @ >0B ;< 2E, BR , = A 0 D,22, ;D, 0< : < H@ ;AB ; B ;A,; ;U,0 ?<22B?;B= ;AB 0 BDB A,= , EB= ,; ;0 ,2 0;,DB6

AB (B < B0B UB B <U B,?A D ;AB B = < ;AB 0; B D;A6 < ;AB 0;; B 0 ?B ;AB EB0; B ; HBD, 1 ,@ 0< B < ;AB =B B =B 0 HBD, ;<0A<U 0 D 0 < 02,? B D6 AB AB,E@ , 0 < ?;<HB , = ;AB ?< B ?B B ; < ;AB ?<2= 0B,0< UB B B=>? D ,2 B ; <<F0 , = A,H ; , ;0 ;<, =B0FB , B ?< = ; < 6 AB@ A,= 2< D >0B= >F ,22 ;AB >B2: , = <> = ;AB ?A 22 < U ;B ;<2B ,H2B ;AB ?B22, 0 , = ?,0B , ;B06 2E, BR: ;A<>DA B=>?B= ;<, 0;, ;B < FA@0 ?,2 F <0; , ; < H@ =@0B ;B @ , = BEB : U,0 0; 22 0;B,= ,0; AB, ;6 $>; ;AB B U,0 = 0?< ;B ; H BU D, < D 0< B < A 0 0>H< = , ;B06 ; 0 <; ,H2B: ,0 0A<U D ;AB 0F ; < ;AB ; B: ;A, ; ;AB ,2?< ;B ;0 UB B <> = , < D ;AB F < B00 < ,2 0<2= B 0: <; , < D ;AB ? ; RB 06 #, 2@) <EB HB 0BEB ,2 < ?B 0 UB 8B <> = A<2= D 0B? B; ?< B B ?B0: , = = ,U D >F , ,== B00 ;<;AB 2<?,2 C> ; , : 0B;; D < ;A ;AB =B0FB , ;B 0; , ;B < ;AB ? ;@ , = ;AB B?B00 ;@ < =BF<0 D ;AB D<EB < : UA< U,0 BF B0B ;B= ,0 ?,F,? ; , ;B= < ?< , = H@ B,0< < A 0 22 B00 6 ; U,0 ,FF, B ;2@ A ;B= ;A, ; AB U,0 D< D , =: < U,0 ;B ; ;B ;2@ =B2 <>0 < B < ;AB U 2= 0,@ D0 , ;; H>;B= ;< 2E, BR => D ;AB 2, ;B = ,@0 < ;AB 0 BDB DA; HB M><;B= ,0 ;< UA, ; F< ; AB U,0 BWFB?;B= ;< B; B: AB UB B = EB < A 0 F<0; : ; 0 0, = ;A, ; AB , 0UB B=: K ;< ;AB ?B B;B @68 <, <;AB < ?B : ;AB 0; UA< =, B= ;< 0,@ ;A, ;

T BB + <80 , = >DB B, >80 = 0F, ;?AB0 $B2 ,080 FFB = ?B0: <06 4 , = 406

T 2E, BR80 2B;;B ;< $2, B <) <E6 F ;B= ;B?AB80 FFB = W: <6 < A 0 E<26 E : D EB0 ;A 0 , ??<> ; < ;AB 0; = 0?<EB @ < F2<;06

< * B?B HB 4 ;AB ?< > ?, ; < U ;A ;2 B U,0 ?< F2B;B2@ ?>;< : , =,0 ;AB D, 0< 0 F<00B00B= < 0B N, ,;B ,D,R B0: , =A,=HBB U< ;;< B?B EB ;AB =, 2@=<2B < ;AB? ;@: ;U,0 ??2B, ;A, ;;AB@ >0;HB 0;, EB=<>;6 AB@A,=< 2@ <<= < < ;@ B DA;A<> 0 ,;;AB < B ; 6

AB BW? ;B B ;< ;AB 0,22@A,== , B= ,U,@ ;AB D<EB < 80 2,0;0; B D;AG AB ;<< ;<A 0 HB=;A,;BEB D: U,0 =B2 > BW;=,@: , =< ;AB < D< ;AB ;A B?B EB=;AB 2,0;0,? , B ;0< ;AB A> ?A: ;AB =<?;< 0 A,E D =B?2, B=;A,;A 0 A<> 0 UB B > HB B=6 0 2,0;?< 0? <>0 ,?;U,0 ;< F <;B0;,D, 0;, @F <F<0,2 ;<0> B =B : HB < B AB A, =B=<EB ;AB ?< , =;<;AB 0B < < ?B F B0B ;6 (B B ,2 C>2 , <$<2 E, 6 ,= 2E, BR B;, B=A 0 0B 0B0: ;0?B ;, ;A,;, ,;;B F;U<>2=A,EB HBB ,=B;<A<2=;AB ;<U : BEB UAB ;AB 0;, E D D, 0< 0< ;AB < ;0 0A<>2=A,EB 0> B =B B=6 $>;;AB < B ;;A,;A 0 0;B A, =U,0 B <EB=: A 0 0>??B00< : $<2 E, : ?,22B=;<DB;AB ,?<> ? 2 < U, :;< UA ?A ;AB B HB 0 < ;AB C> ;,: <2B00 ;A, ;AB < ?B 0?< , = D ?< F0: UB B E ;B=6 AB@E<;B=;A,;> ;AB B0 0;, ?B U,0 F<00 H2B: , =0B ;<>;$ D,= B (B B ,2 "<> ,0: ;AB , UA< A,=0< UB22 =B B =B= 1 < N> ?A: ;< <H;, ;B 0 < >DB B,>6 ;AB < D < ;AB ;B ;A ;AB 1, 0A,2 B?B EB=A : , === ?;,;B= ,0 F2B 0> B =B : U ;A<>;, @ < ;AB ,E<> ,H2B ?< = ; < 0 UA ?A "<> ,0 ,; 0;=B , =B=6 0 < 2@?< ?B00 < U,0 ;A,;AB < B B= ;< BW?A, DB ;AB D, 0< < < , BM>,2 > HB < ;AB > A,FF@F 0< B 0 < * >F< ;80 , @: <U 2@ D 0B @< ;AB F< ;<< 0 ,; ,=R: ;AB >F B B C> ;,?< ?> B=6 $>; ;AB H, D, U,0 BEB ,; B=: ,0 ;AB ,>;A< ; B0 ,; BE 22B UB B <H=> ,;B6

;AB < D< * B?B HB ;AB 0> E E< 0 < ;AB D, 0< , ?AB= <>; : , == 2, == =<U ;AB , 0 < ;AB D2,? 0 < ;AB 1 B ?, =,26 2@ : B ?, B < ;A ;AB0B 2<< B= 2 B 2 E D 0FB?; B0: 0< F,2B: UB, : , == ;,;;B B= ;A,; K;AB HB0 BDB 0:8 ,0 B@B U ; B00B0 <H0B EB=: K B2;,0A, B= ;< A,EB HBB AB2= ,; H,@ 0< 2< D H@ =@ D B 68 AB B UB B : < B 2@ D ;AB

T),F B I 6 O5J 0,@0 ;A,; ;AB 0< ; B U,0 0< , 0>??B00 >2 ;A,; ;AB (B < B0B <FB B=;AB U,@ < ;2 B D, 0< < ;AB < 0;,H2B < ;; < B0?,FB ;< ;AB ? ;@6 $>; ?, = < ,>;A< ;@ < ;A 0 B ;AB ;AB " B ?A < ;AB F, 0A , ,; EB0: 0BB B0FB? ,22@ .,?, 6

5 % # " # " #) (#) P

< => DB< ; <= => DB< ; 22 AB B,?AB= " D>B ,0 AB =,@ , ;B A 0 , E,2 , ;; ;A, ;F2,?B AB U,0 <> =B,=: < , H, <U V ;AB< 2@ HB= D , ;B= A V ; ;AB= ;@ ?B22, UAB B AB A,= HBB F2,?B=6 ;0 F <H,H2B ;A, ;AB FB 0AB= < , ;> ,2 ?,>0B0: H>; , @ F, , =0 HB2 BEB= ;A, ;AB A,= HBB > =B B=

(B, ;,0 ;AB 2<00B0 < ; ;AB D, 0< < (B < , A,= HBB : ;AB@ UB B , BW?BB=B=: H<;A F<0 ; EB2@ , = F <F< ; < , ;B2@: H@ ;A<0B < ; ;AB HB0 BD D , @6 AB " B ?A < A? ,2 B;> 0 0A<U ;A, ; < C> B ; ;AB ;A BB = E 0 < 0 ?A, DB= U ;A ;AB , ;; , ? : ;A<0B < . B = B : 1 < <: , = %B??A : A,= O:O P H,@< B;0: , = ;AB ;U< = E 0 < 0 < ; ;AB ?<EB D , @: ;A<0B < <>A, , = + <: :4P 7 ;AB B UB B :P 4 , ; 22B @ B , = B D BB 0 <EB , = ,H<EB ;AB0B D> B06 * B?B HB : ;UB ;@ =,@0 , ;B ; ;AB 0> B =B : , = UAB ;AB BD B ;0 A,= HBB N< B= H@ <0;< ; AB ?< E,2B0?B ;0: ;AB ;A BB 0 BDB = E 0 < 0 ?<> ;B= P: O B : ;AB ?<EB D = E 0 < 0 :PPP: , = ;AB , ; 22B @ , = B D BB 0: : 5 6

A 0 0A<U0 ,2<00 < <EB : B 7 H>; < BW, , ; < ;AB =B ? ; 0 0BB ; <HB BEB 2, DB : < ; U< BU H, ; ;,2 < 0 < " , ?B A,= N>0; N< B= . B = B 80 = E 0 < * B?B HB : , = ;AB 6 H,@< B;0 0A<>2= HB =B=>?;B= < A 0 ;<; ,26 ; U<>2= 0BB : ;AB : ;A, ; ;AB ?,F;> B < (B < , ?<0; ;AB 4;A < F0 ,H<>; O6 B : ,0 UB22 ,0 , UA<2B ?, F, D D 0B,0< : < F 2 ;< * B?B HB 6 AB , ;; , ? < , ;,2< , A,= HBB H <>DA; ;< , ?< F2B;B 0; , =0; 22: , = UAB (B < , B22 ;AB " B ?A <??>F B= <;A D H>; ;AB > B= ? ;@: ;AB < ; B00B0 < <0,0 , = " D>B ,0 A, = H@ ;AB < ; B : , = ;AB 0<2, ;B= $, ?B2< , : UAB B * >AB0 B: U ;A ;AB P: B < A 0 = E 0 < : A,= HBB 2@ D M> B0?B ; ,22 ;AB 0> B , = ,>;> 6 >?A , < ?B U,0 ;<< UB, ; ;< , B =B; , ?A B ;0 ;< , = ;6 @ < > DB B, >: 0 ?B O6 B , ; 2B, 0; UB B BB=B= < ; ;AB D, 0< < ; ;AB ? ; , =B2 , = ;AB <>;2@ D < ;0: , = ; U<>2= A, EB HBB A<FB2B00 < ; ;AB 0 ,22 B , =B ; <; , B ;AB B2=6 * >AB0 B < 2@ ?< =>?;B=

T "< =B; , 20 < ; A 0 = 0D ,?B >2 ? >B2;@: 0BB ;B?AB80 K #2<D <8 < 2E, BR ; ;AB F <?BB= D0 < ; ;AB 1 ,= = ?, =B @6 AB # FB <) , F<2B< A 0B2 >0; AB, ; ;AB B0F< 0 H 2 ;@: ,0 ; U,0 H@ < =B 0 < + , 0 ;A, ; 2E, BR U,0 0B ; H,? < " , ?B ;< " D>B ,06 FF, B ;2@ AB U,0 ;< HB ; B= ,; $, ?B2< , : , = FB A, F0 BWB?>;B=6 AB B 0 < ,22>0 < ; <; ;AB , ;; B ; ;AB 8 %() . %' .%' K) 3%

=>?B $2, B ;< ; @ , BU < B 0 EB <EB B ;6 & A@ U,0 ;AB ?< D B00 <;? ?,22B= BF;B HB , ;AB ;A,) <EB HB Z $2, B A,= ,2U,@0 =B?2, B=;A,;AB U,0 ;<<UB, ;<0 , H,;;2B U ;A ;AB " B ?A < ;AB , 0 D < ;AB 0 BDB: H>;; 22 ;AB 2,0; < B ;;AB ,;,2, 0 ?< ;B ;B=;AB 0B2EB0 U ;A , D> D U ;A A :, = U ; D B < 0; , ?B0 ;< ;AB B ; ,2 C> ;,: 0;B,= < 2B = D A ;AB , = < ;AB 2,0;2BE B06

B < ;U< F< ;0 ?< B?;B= U ;A ;A 0 , <>0 0 BDB BM> B ,U< = < ?< B ;6 ;0 M> ;B ?2B, ;A,;6 @ => D ;0 B, 2@ 0;,DB0 = = <;; @ A 0 A< B0;HB0;;< AB2F B = B 6 * > D C> B , = C>2@ A 0 ?<EB D , @ U,0 =< D <D<<;2 UA,;BEB ,;. ?A7 2 B F B;B =B= ;A,;AB A,= F2,?B= ;;AB B < =B ;;< U, = < F<00 H2B ,;;,? 0 H@ $2, B6 $>;;U,0 ,;;B < F>H2 ? <U2B=DB ;A,;$2, B U,0 , ,U,@ ,D< : B D,DB= A 0 > A,FF@ ?, F, D ,D, 0;>?AB;:, = ;A,; <>F D @:2B ;, ;, ,D< ,U ;A ,BU ;A<>0, = B : U,0 <;, 0B <>0 =, DB 6 ;6 @ ?<>2= A,EB 0F, B= ,UA<2B = E 0 < < B < ;AB 0 BDB <FB ,; < 0: U ;A<>; 0 D , @;A D6 AB A,= =< B 0<: (2B < , ?<>2= A,EB HBB ,FF <,?AB= < ;U< 0 =B0 0;B,= < < B: ;AB 1 B ?,=,2 < ; DA;A,EB HBB ,;;,? B=: , = ;AB 2<<0B H2<? ,=B: UA ?A U,0 ,22 ;A,;. B = B ?<>2= BBF >F: < U, ;< < < B B : DA;A,EB HBB ,=B B B?; EB6 $>;;6 @ ,22 ;A <>DA A 0 2 ;, @ ?, BB B, B= ,BF>;,; < < ?,22<>0 0B2 0A B00 , = A,H ;>,2 2B,E D < A 0 ?<22B,D>B0 ;AB 2> ?A6 ;A 0 <??,0 < AB U,0 H ;;B 2@ < B =B= U ;A . B = B : < D E D A 0B2 ;AB , 0 < , BM>,2: , = ?< B0F< = D = B?;2@ U ;A ;AB # FB < 6 AB B ?, HB < =<>H;;A,;AB ;<< ,2 ? <>0 F2B,0> B 0BB D A 0 , 2> B06 ;0 A, =2@ = 0D> 0B= A 0 ??BEB , = F2,>0 H2B ? : 3 .%(L)# ' . .% '.3 5 %% 5 6

8),F<2B< 80 ?< B ;0 < ;AB <FB ,; < 0 < A 0 DB B ,20 , B ,2U,@0 ;B B0; D: ;A<>DA 0< B; B0 <> =B= < FB B?;< ,; < : < E ; ,;B= H@ F B= 0F<0 ; < 06 ;6 @ 80 ?, F, D AB U ;B0 X* 0F6 <6 P: OS ;< 2, B: A 0 1 0;B < M : G

! , ;B , B > ,FF< ;0B B>W 0> 2,?, F,D B =>DB B ,2 (<>E < , ; @ B ,;,2<D B6 I J > 2B0 , 0< 0 M> < ;F< ;B ,BE,?>B ?B;;B F <E ?B: 2< 0M>B , ,D<00B =;, ;F 0B B;0,N< ?; < , ;B ,EB? 2B , B ?A,2 1 < ; B 6 I J > ?B M>8 2 08B0;2, 00B ,;;,M>B F, 2B0 #0F,D <20: B;B 2B0 ,N, , 0 ,;;,M>B0: B;0> ?B M>B: ,F B0 2B0 ,E< ;<>N<> 0 H,;;>0 F, 2,E,2B> =B0 ; <>FB0: 2 8,N, , 0 F < 2B =B 2,

.B = B :' < ';AB' <;AB ' A, =:' 0BB 0' ;<' A,EB' B2;',22';A <>DA';A,;' AB' U,0' HB D' ,0 B=';<' FB < ' ,' ;,0 ' ,2 <0;' F<00 H2B:' UAB ' AB' U,0' 0B;';<';, B' (B < ,' U ;A' A 0'<U ' O: ' B :' > , =B=' H@' ;AB' ?<EB D', @6' 0' < 2@' B?B F;' < ' 0>??B0O' U,0' ;<'; @';<' A> @' < ' ;AB' ,;;B ' H@' =B2 EB D' =B0FB ,;B' H2<U06' $<;A' ;AB' ,00,>2;' < ' 1 < N> ?A' < ' C>2@' ' , =' ;A,;' < ' ;AB' ? ;@' < ' BF;B Y HB ' 5' UB B' F B ,;> B7 ;AB B' U,0' 0< B' BW?>0B' < ' ;AB' < B G .B = B ' A,=' <;' @B;' B,2 RB=' A<U' UB22' 2E, BR' ?<>2=' DA;6' $>;' ;AB' 0B?< =' 0BB 0' > F, =< ,H2B:' , ;B ' ;AB' U, D' B?B EB=' ,;' 1 < N> ?A6' ';AB' DB B ,2:' ,0' AB' =B?2, B=' HB < B' =B2 EB D' A 0' ,00,>2;:' 0; >0;B=' A 0' <U ' ; <<F0:' AB' A,=' <' DA;' ;<' < =B ' ,' 0;< ' ,';' ,22:' ?< 0 =B D' A 0' BWFB B ?B' < ' ;AB' U,@' ' UA ?A' ;AB' F, , =0' A,=' HBA,EB=' ' C>2@6' B' ,?;B=' < ' ;AB' ,22,? <>0' ;AB< @' ;A,;' ,' F ,?; ?,H2B' H B,?A' F2 BO' ,' ;<U ' ;A,;' ?, ' HB' ;, B :' UA ?A' 0' , ' < ' HB D' ;AB' ?,0B' ' ;AB' D, 0< ' , B' H<;A' =B0FB ,;B' , =' DB <>0' ' =B B = D' ;AB 0B2EB06' AB' < 2@' U,@' ;<' =B,2' U ;A' 0>?A' ,' B0<2>;B' , =' ?,F,H2B' ,=EB 0, @' U,0' ;<' F <?BB=' H@';AB' 02<U' , =' BD>2, ' B;A<=0' < ' 0 BDB? , ;:' ;<' 0,F' DA;' >F' ;<' ;AB' = ;?A' HB < B' =B2 EB D' , ' ,00,>2;:' , =' H, ;;B ' BEB @;A D' ;<' F B?BO' HB < B' 0 D' ,' , 6' A 0' U,0' A<U' 1 < N> ?A' U,0' ,?;>,22@' ;, B :' , ;B ' ;AB' 0;< ' A,=' , 2B=6' ,E D' B ;AB ' B0;,H2 0AB=' A 0B2 ' ??<0B' > =B ' ;AB' U,220:' < ' 0>H=>B=' ;AB' 2, D' BO' < ' ;AB' ,2E, @' , =' A,F;B ' B=<>H;0:' < ' ,0?B ;, B=' A<U' , ' ;AB' F, , =0' A,=' F BF, B=' B ' =B B ?BO' < ' ;AB 0B2EB0:' AB' A,=' <' DA;' ;<' ,;;,? ' ,';',226 0' ;<' $2, B:' BEB ' , ;B ' , D' ,22' F<00 H2B' ,22<U, ?BO' < ' ;AB' ,?;' ;A,;' AB' ?<>2=' <;' ; 0;' A 0' ; <<F0 V ;AB' A,2 ,22 B=' U B? 0' < ' 1 , ' , =' $B2?A ;B V < ' ,' H,;;2B' ' ;AB' B2=:' AB' >0;' @B;' HB' F < <> ?B=' D> 2;@' < ' BBH2B BO0' , =' U, ;' < ' DB > ;@6' 'AB' ?<>2=' BEB ' H D' >F' B <>DA' BD>2, 0' ;<' D EB' A ' ,' ?A, ?B' < ' ,? D' ;6' @ :' ;AB' ,>2;' U,0' 2, DB2@' A 0' <U G ,' < B' < ? H2B

E ?;< B6' I J' > ' ?B' ,:' F, ' ?B;' B0F ;' =8B D< 0 B' M>' 2> ' BO;' F, ; ?>2 B :' ?< F < 0' 2B' 0 BDB' =B' (B < B6 0> ' ?B' M>8 2' 8,' N, , 0' 0B?<> >' 0> 0, B ;' 8, BB' ,00 BDB, ;B:' 8,' ,>' ?< ; , B' ,;; BB' ,' 2> :' B ; , ' 2, 00B' ,E ;, 22B ' 2,' E 22B6' IOJ' > ' ?B' M>8 2' ,' M> ;;B' 8, B B' 0, 0' FB 00 < :' 0<>0' 2B' E, ' F B;BW;B' =B' ,2,= B68

AB' 0;' F< ;' 0BB 0' > N>0;';<' ;6' @ 6' " < ' A 0' F<0 ; < ' ' < ;' < ' , ,D< ,:' , ;B ' . , 20:' AB' A,=' <' B,2' ?A, ?B' < ' ?< H D' A 0' <FB ,; < 0' U ;A' ;AB' , @' < ' ,D< 6' $>;' ;AB' <;AB ' ;A BB' ?A, DB0' 0BB ' UB22 <> =B=6

DB B ,2 U<>2= A,EB 0 0;B= ;A, ; ;AB . ,2B ? , B0B EB0 0A<>2= , ?A , = U<>2= A,EB 0; FFB= %B = , , = , ,D< , < B G ; ?<>2= 0, B2@ A,EB HBB =< B: < B ;AB >?A?; < * >AB0 B U,0 0A<U D , @ 0 D 0 < ;A B,;B D ;A<0B F< ;06 B DA;, A,EB 0 0;B= ;A, ; ;AB , ; , 2, C> ; , 0A<>2= ?,22 <>; ;AB >22 2BE@ < ('% %(BF;B HB 0;B,= <) <EB HB 6 B DA;,20< A,EB ,=B , HB;;B >0B < ;AB BD>2, 0 ,2 B,=@ ;AB B2=: ;AB H, =0 < <E , : 1 2, 0: , = 2, <06 AB0B M>B2?;B0 = = , = ,H2B 0B E ?B ,22 ;A <>DA ;AB 0 BDB: H@ A, ,00 D . B = B 80 B, , = ?>;; D < ;8 A 0 ?< E<@0: H>; ;AB@ UB B <; B F2<@B= I,0 ;AB@ 0A<>2= A,EB HBB J ?< H , ; < U ;A ;AB BD>2, 0: H>; ,22<UB=: ,0 , >2B: ;< D< < T < BW?> 0 < 0 < ;AB <U : UA ?A A,= < B2,; < ;< ;AB , <HNB?;0 < $2, B80 0; , ;BD@6 AB < 2@ <??,0 < < UA ?A F <FB >0B U,0 ,=B < ;AB U,0 UAB : < BF;B HB : ;AB@ UB B 60B; ;< ;A B,;B . B = B 80 2 B0: UA 2B (, ? , < =B80 ?< E<@ U,0 ,FF <,?A D (B < ,6 ; ,@ HB F2B,=B= ;AB F, 0A DB B ,280 =B B ?B ;A, ; ; U,0 = ?>2; ;< BW,?; <HB= B ?B < ;AB ?A B 06 ;AB B U,0 , = 0; ?; ?<<2 B00 HB;UBB ;AB BD>2, 0 , = ;AB BD>2, 0: UA ?A 0< B; B0 2B= ;< ,?;>,2 M>, B20 , = ?< 2 ?;0 UAB ;AB@ B;6 $>; AB B ,D, ;AB BF2@ 0 ;A, ; < B < ? H2B ?,F;, DB B ,20 UB B ,H2B ;< ?< ; <2 ;AB M>B 2B;B0: , = $2, B , 2B= ;< =< 0<; ; U,0 < 2@ < B < B 0 D < A 0 ,=BM>,?@6 ; 0 F<00 H2B ;< ,E< = ;AB ?< ??>0 < ;A, ; AB 0 , ,DB= ,;;B 0: , = ;A, ; A 0 0B?< = , = ;A = ,;;B F;0 ;< B2 BEB (B < , AB A,= BFB,;B= ;AB ;,?; ?0 < A 0 0;: AB U<>2= A,EB A,= , , HB;;B ?A, ?B < 0>??B00 BF;B HB < 2@ = = AB , B , @ 0? B ; ? ,;;B F; ;< = 0; ,?; ;AB B B @80 ,;;B ; < , = < ?B0: , = < ;A, ; <??,0 < AB U,0 0>??B00 >26 > D ;A D0 >F: ; ,@ HB 0, = ;A, ; AB U,0 <; U < D ;< B >0B H,;;2B U ;A ;AB ; <<F0 ;A, ; AB A,= ,?;>,22@ H <>DA; >F ;< (B < ,6 ;AB@ U<>2= > =<>H;B=2@ A,EB HBB

AB . ,2B ? , ; <<F0 , ; 1 , UB B B2BEB H,;;,2 < 0: E R6 ,E< , I;A BBJ: 0; , = = ,R,=< B0 =B . ,2B ? , I;U<J: B ?, I;U<J: . <2> ; , <0 =B . ,2B ? , I< BJ: 0; < . ,2B ? , I;A BBJ6 ;AB0B < 2@ ,E< , I <U ;U< H,;;06 < 2@J , = . <2> ; , <0 =B . ,2B ? , ;> B= >F < ;AB B2 B < (B < ,6 2< D U ;A ;AB ?, B ;U< B0A BD B ;0: = ,R,=< B0 < A>B2, : , = 2 , R, : UA ?A A,= <; HBB , ; 1 , ,6 $>; ;AB0B UB B 1 > ? , : <; . ,2B ? , : ; <<F06

<>;B=' 'AB' A,=' 0 B=',' DB B ,2' B D,DB B ;6' 0' ,>2;' U,0' ;A,;' AB' = =' <;' H D' >F' 2, DB ' < ?B0:' UAB ' ;' U,0' 'A 0' F<UB ' ;<' =<' 0<:' H@' ;AB' BWB ? 0B' < ' ?< F>20 < ' < ' ;AB' ,;,2, ' , =' .,2B ? , 'C> ;,06' $>;';AB0B' H<= B0' >0;' 0A, B' $2, B80' B0F< Y 0 H 2 ; B0G' ;AB@' > =<>H;B=2@' HBA,EB=' ' ,' 602,?' , =' 0B2 0A' ,0A < :' , =' 2B;' (B < ,' FB 60A:';A<>DA' ;' U,0' BBF D' ;AB' U,' < ' ;AB '=<< 0' < ' ,' 2< D' B DA;' < ;A06

22' ;AB' < B' ? B= ;' 0' =>B' ;<' 2E, BR:' ?< 0 =B D' ;AB' U,@' 'UA ?A' AB' U,0' 2B ;' > 0>??<> B=:' , =' B=' U ;A' E, ' F < 0B06' '2B00' ?< 0;, ;' 0<>2' U<>2=' A,EB' ,H, =< B=' ;AB' =B B ?B' 2< D' HB < B7' ;AB' 2,0;' ;U<' < ;A0' < ' B0 0;, ?B' UB B' A 0' 0<2B' U< G ' AB' A,=' ,22B ' 0 ? ' ' ?;<HB ' 60;B,=' < ' *B?B HB :' A 0' 0>H< = ,;B0' U<>2=' A,EB' @ B2=B=' 2< D' HB < B6' $>;' ;' 0' <;' B B2@' < ' AB < ?' <H0; ,?@' ;A,;' AB'8 A>0;' HB' F , 0B=6' #EB @' =B;, 2' < ' ;AB' =B B ?B' 0A<U0' ;A,;' AB' U,0' ,' <0;' DB <>0' , =' F <E =B ;' DB B ,26' <;A D' U,0' 2B ;' > =< B' ;<' , B' ;AB' U< ' < ' ;AB' HB0 BDB 0' A, =6' 1 < B<EB :' ,0'),F B ' A,0' <H0B EB=:' ;' 0' <;' ;AB' 2B,0;' < ' A 0' ; ;2B0' ;<' B ;' ;A,;' AB' F B0B EB=' ,' 0; ?;' = 0? F2 B:' , =' BW,?;B=' ;AB' F<00 H2B' ,W > ' < ' U< ' < ' 0<2= B ' , =' ? E 2 , ' ,2 B:' U ;A<>;' ;AB' >0B' < ' , @' < ' ;A<0B' UA<2BY 0,2B' BWB?>; < 0' UA ?A' = 0D 8,?B=' ;AB' =B B ?B' < ' , ,D<00,6' 0' U< =0' UB B' 0< B; B0' ; >?>2B ;:' H>;' A 0' ,?;0' UB B' N>0;' , =' <=B ,;B6' B' BEB ' ?<> ;B , ?B=' <H 2,U:' ,0' = =' +,2, <W:' @B;' AB' U,0' , ' HB;;B ' <HB@B=' H@' ;AB' ? ; RB 0:' , =' D<;' ,0' D<<=' 0B E ?B' < ' ;AB ' ,0' = =' ;AB' ,D< B0B' ?< , =B 6' B' 0A<UB=' ;A,;' D<<=' < D, R,; < ' 0' <;' ?< F,; H2B' U ;A' F,; <; ?' B ;A>0 ,0 :' , =' 0' , ' < B' B B?; EB' ' ;AB' A<> ' < ' =, DB ' ;A, ' B? 2B00' ?<> ,DB' , =' H2 =' 0B2 0,? ?B6

% & " ' O) N' % ! $ ')

#' ' ' 1)' 1 + ( )' "' 'G 1 1 # :') :'
) *' %$ ' * #' 1 #

0' B , 2@' ,0' >D>0;' :' UAB ' & B22 D;< ' A ,=' <;' >22@' ?< Y F2B;B=' A 0' B; B , ;' < ' 2 , ,R' , =' C , , ?BN<' ;<' $, = , N<R' , =' 1 B =, :' ;AB' ?B ; ,2' C> ; ,' A ,=' ,2 B ,=@' HBD> ' ;<' FB0;B ' A ' , =' A 0' H <;AB :' ;AB' H , 00 , =< ' , ;' BE 22B:' U ;A' F2 , 0' < ' ,' B0> F; < ' < ';AB' < B 0 EB' ' ;AB' E , 22B@' < ' ;AB' , D>06' ' ;A , ;' =, @' 1 , ; ' =B' (, , @:' ;AB' B? B; , @' < ' ; , ;B:' U <;B' ;<' BF B0B ;' ;<' & B22B02B@' ;A , ;' AB' A , =' D<<=' B , 0< ' ;<' HB2 BEB' ;A , ;' ;AB' ; <<F0' < ' . ?;< :' 1 < ; B :' , =' <>2;' UB B' , D' ,' DB B ,2' <EB B ;' ;<' ;AB' B, :' , =' ;A , ;' ;AB' < B ;' A , =' , W EB=' UAB ' ;AB' , 22 B=' , B0' ' #0; B , => ,' , =' % ,' 1 , ?A ,' 0A<>2=' K' <EB' < U , =' U ;A' ;AB' D B , ;B0;' , ?; E ;@:' B ;AB ' ;<' <H0B EB' < B' ??<0B2@' ;AB' <EB B ;0' < ';AB' B B @:' < ' ;<' , ; ; , ? ' A ' UAB ' ? ?> 0; , ?B0' , @ B =B ' ;' BWFB= B ;' H6' AB' " B ?A' <EB B ;' < ' B; ?, ;' U , 0' UA<22@' , D , @:' , =' ;' 0' , 0;< 0A D' ;A , ;' ;AB' F , 0A' (<EB B ;' 0A<>2=' A , EB' HBB ' 0<' , =' , 0' ;<' HB2 BEB' ;' F<00 H2B' ;A , ;' K ;AB ' B; <D , =B' <EB B ;' , @' A , EB' < D , ;B=' ' , ??<> ;0' 8B?B EB=' < ' ;AB') < ;A:' UA ?A' ?< FB2' ;AB' B B @' B ;AB ' ;<' B; B' ;<' ;AB' ;B < ' < ' " , ?B:' < ' ;<' ; , B' >F' , ' F<0 ; < ' B , B ' ;<' ;AB' +@ B BBO6' ' ,' D <> =2B00' > <> :' < ' ;AB' A DAB0;' ; 0 ?' F <H , H 2 ;@:' ;AB@' UB B' B , =@' ;<' A> 2' ;AB' BU2@ , 22 B=' ; <<F0' < ' #D> ,' , =' . B BD , 0' >F< ' ;AB' " B ?A:' , =' ;<' E ;B' & B22 D;< ' ;<' N< ' ' ;AB' , =E , ?B6' B0F< 0 H2B' E<2 ;@' ?<>2=' D<' <' > ;AB 6' $>;' ;AB' C> ; , :' , 0' A , 0' HBB ' , 2 B , =@' 0 , =:' UB B' B , DB ' < ' ,' 2 ; , @' 0>??B00:' UA ?A' 0A<>2=' ?, >0B' ;AB ' > F<F>2 , ;@' ;<' HB' < D<; ;B :' , =' UB B' B , =@' ;<' 0B RB' < ' , @' BW?>0B' < ' < =B D' ;AB ' ; <<F0' < U , =6' A 0' F , ; ?>2 , ' > <> ' = B=' , U , @ V ;AB' " B ?A' UB B' 0; 22' ' < ?B' < ' ;AB' , D>0:' , =:' , 0' ,' , ; ;B ' < ' , ?;:' ;AB' < 2@' <EB B ;' < ;AU , =0' < ' ;AB ' F , ;' A , =' HBB ' ;AB' B;> ' < ' 9 B@80' ?< F0

' * B' (, , @ ;<' & B22B02B@' ' M%33%(3%;' 1 () ' #%(' F6' 5 6

I #' ' ' 1)' 1 + ( )' "' 5' A

;<' ,2, , ?,6 $>;' ;A<>DA' ;AB' ; >;A' U,0' 0<< ' = 0?<EB B=:' ;AB' C> ; ,' < 2@' HBD, ' ;<' 2<< ' <>;' < ' BU' BW?>0B0' < ' B?< B ? D' ,?; EB' <FB , ; < 06

& B22 D;< :' UAB ' ;AB60B' 0?AB B0' UB B' 2, =' HB < B' A J:' B ;B , ;B=' A 0' B >0,2' ;<' N< ' ' , @' < B 0 EB' ?, F, D :' F< ;B=' <>;' ;A, ;' ;AB' ,22 B=' < ?B0' UB B' <;' 0; < D' B <>DA' ;<' B H, ' < ' , @' 0>?A' A,R, =<>0' > =B ; , D:' , =' H2> ;2@' BWF B00B=' A 0' <F < ' ;A, ;' K AB' U,0' >?A' , , =:' < ' UA, ;' AB' A, =' 0BB ' < ' ;AB' F <?BB= D0' < ' ;AB' B ; ,2' C> ; ,:' ;A, ;' ' ;AB' = 0; H>; < ' < ';AB ' < ?B0' ;AB@' =<' <;' ?< 0 =B ' 2 ; , @' =B B ?B' , =' 2 ; , @' <FB , ; < 0' 0<' >?A' ,0' F<2 ; ?, 2' ; D>B:' , =' ;AB' , ;; , B ;' < ' FB; ;@' F<2 ; ?, 2' <HNB?;0:8' B' ;AB ' F <?BB=B=' ;<' , B' , ' B60; , ;B' < ';AB' " B ?A' , B0:' ;<' 60A<U' ;AB ' > B ?, 2' 0>FB < ;@' ;<' ;AB' ,22 B07' ' ;A 0' AB' EB @' >?A' > =B B0; , ;B=' ;AB' B B @80' B0<> ?B0:' ?, 2?>2, ; D' ;AB' UA<2B' < ?B' < ' ;AB' B DA;' ?< F0' ' F, ' ,;' : ' B :' BW?2>0 EB' < ' 0 ? ' , =' D, 0< 0' <;' ,E, 2, H2B' < ' ,?; EB' 0B E ?B6' 0' ,' , ;;B ' < ' ,?;' ;AB B' UB B' : ' B :' <;' : :' U ;A' ;AB' # , D2B0' , ;' ;A, ;' < B ;:' , ;B ' ,22' =B=>?; < 0' A, =' HBB ' ,=B:' 0<' ;A, ;' A 0' B, 0< D' U,0' , ' < B' ?<DB ;' ;A, ' AB' 0>FF<0B=' $>;' ;A 0' < 2@' , B0' < B' ?>2F, H2B' ;AB' <H0; , ;B' =B;B , ; < ' < ';AB' C> ; ,' ;<' B0> B' <FB , ; < 0' U ;A' ;AB' >?A' B < ' < ?B' UA ?A' ;AB@' A, =' , ;' ;AB ' = 0F<0, 26

' = 0 , @B=' H@' ;AB ' 0;' BF>20B:' ;AB' F, 0A' 0;B 0' UB B' 0<< ' , D' BU' BF B0B ; , ; < 0' ;<' & B22B02B@' , =' & B22 D;< :' ' < =B ' ;<' =>?B' ;AB ' ;<' ?< ;' ;AB' # D2 0A' , @' ;<' ,' < U, =' F<2 ?@6' AB@' 0B ;' ' BFB, ;B=' 0?AB B0' < ' 0>FF2@ D' & B22 D;< ' U ;A' <<=' , =' ; , 0F< ;' < ' ,' 2, E 0A' 0?, 2B' 7 H>;' AB' B B2@' BWF B00B=' A 0' =<>H;0' ,0' ;<' UAB;AB ' < =B 0' ;A, ;' 2<< B=' , = , H2B' < ' F, FB ' U<>2=' BEB ' HB' ?, B=' <>;' ' F ,?; ?B6' B' ?< 0B ;B=' < ' ;AB' F B0B ;' ;<' B , ' , ;' $, =, N<R:' ,0' 2< D' ,0' AB' ?<>2=' 0>H0 0;' A 0' , @' ' ;0' B E < 0:' H>;' U, B=' ;AB' C> ; ,' ;A, ;' ;' U,0' < B' F <H, H2B' ;A, ;' AB' U<>2=' B; B' U ;A ' ;AB' +< ;>D>B0B' H<2=B :' < ' B, 0< 0' < ' 0>FF2@:' ;A, ' ;A, ;' AB' U<>2=' N< ' ' , <;AB ' ?, F, D ' < ' ;AB' , D>0:

* B0F ;B' < ' ,22:' ;AB' D<EB B ;' , ;' BE 22B' UB ;' < ' U ;A' ;0' F2, 0' < ' ,' DB B ,2' , =E, ?B:' BEB ' , ;B ' ;AB@' B?<D RB=' ;A, ;' & B22 D;< ' U, 0' <;' ;<' HB' <EB=6' ' D , =' F2, ' < ' <FB , ; < 0

' & B22 D;< ' ;<' & B22B02B@:' < ' 1 B =, :' BF;6' :' 56
' BB' ;AB' =B; , 20' ' & B22B02B@' ;<' , D:' BF;6' :' 5:

5S # C ') 8 +%) " 1 + ( ) (5

U,0 D ,=>,22@ =BE 0B= H@ ;AB . , 1 0;B < B2 , = A0 ,=E 0B 06 ;,;B=0A< ;2@ ; U,0 ,0 <22<U06 AB , @ %, 1 , ?A,: UA ?A) B BD,0 2 ,= ,22 B= ,;B ;AB = 0,0;B < A < ,? =: U,0 ;< HB , 0B= ;< ,0; B D;A < <EB : B H@ ;AB = , ; D ;< ; < ,> 22 ;U< ;A =0 < >B0;,80 <2= , @ < #0; B ,=> ,: BN ;B HB #D> , , ?AB= B,0;U, =0 >F ;AB (>,= , ,: U ;A ;A BB= E 0 < 0 < , ; @ , = ;UB2EB < ;A ;BB BD B ;0 < ?,E,2 @:;< N< . B BD,0 A AB B , D < ?B: , <> ; D ;< ;U< = E 0 < 0 < , ; @ , = : ?,E,2 @: U,0 2B ; #0; B ,=> , > =B ;AB * > B < 2H>M>B M>B: ;AB < 2?B ;< UA< ;AB D<EB B ; U,0 <H2 DB= ;< ,00 D ;A 0 , @: HB?,>0B ;AB C> ; , < $,=,N< F B00B= < A 0 ,FF< ; B ; , = U<>2= <; AB, < , @ <;AB ?< , =B 6 B U,0 ?< Y 0 =B B= , D2<FA 2: , = , B = < 0< B < ;AB =,2>0 , ,2?< ;B ;0: 0< ;AB < ?B 2B ; U ;A A U,0 ?>; =<U ;< ;AB > 6 22 ;AB <2= BD>2, BD B ;0 UB B U ;A= ,U < A : 0,EB < B 0 D2B H,;,2 < : , = AB U,0 2B ; U ;A <;A D 0,EB ;AB BU2@ , 0B= E<2> ;BB > ;0: 0< B < UA ?A A,= HBA,EB= 0< H,=2@ ,; ,2,EB , 6 0 ?,E,2 @ U,0 0<< , ;B B=>?B= H@ ;AB < =B ;< 0B = ,H D,=B ;< N< ;AB @ < ;AB) < ;A: 0< ;A,; AB U,0 ,22@ 2B ; U ;A < 2@ EB BD B ;0 < ;A,; , < ,H<>; : 0,H B06 A 0 , ; @: ,H<>; : 0; < D: <EB O: UB B ,H0< HB= H@ ;AB D, 0< < $,=,N<R: 0< ;A,; AB A,= < 2@ : B ,E,2,H2B < 0B E ?B ;AB B2=6

#D> ,: < ;AB <;AB A, =: ?, B= U ;A A ;< %, 1 , ?A, 0< B : B : ;AB F ? B= ?< NN0 < ;AB #0; B ,=> , , @ 7 , =: ,0 ;AB B , 0 < . B BD,080 = E 0 < 0 ,22 B= , = B? > ;B= , ;B 2 < ,? =: , <> ;B= ;< ,;AB < B ;A, ;A,; > HB : ;AB > ;B= < ?B BW?BB=B= : 0,H B0 , = H,@< B;06 & ;A ;A 0 , @ ;AB C> ; , ;B =B= ;< , B , = B?; 0; < B , ; 1 , = =: UA 2B 2H>?N>B M>B U,0 = B?;B= ;< 0A<U A 0B2 < ;AB ,D>0: < ;< 2 ,W8,R , = ,2,EB ,: U ;A ;AB <HNB?; < =B; , D

T 0 AB,= M>, ;B 0 <EB= < >W 22< ;AB 0BEB ;BB ;A: > B , ; %, B B , < ;AB ;UB ;@ 0;: , = N< B= ;AB , @ < %, 1 , ?A, , H<>; ?;<HB 6

T BB ;AB 2 0; < 2H>M>B M>B80 , @ FFB = W <6 6 22 B B A,= HBB ;UB ;@ < B BD>2, H,;,2 < 0 >B0;,80 , @ C> B6 UB ;@ < ;AB0B , ?AB= < U ;A #D> ,: 2B,E D < 2@ < B IO;A . ,22<< (>, =0J U ;A 2H>M>B M>B6

5S * #%' + 9 ` ' #8 ' K 1 !' "' #' %# # 2_' 4

< B:' ;AB' BU' K @' < ' ;AB' %B ; ' BF B0B ;B=:' 0' , ' 0' B0'
='?,=B0' UB ;:' $2, B80' < D ,2' K @' < ' (,2 ? ,%8' ;' A,='
;AB' 0, B'?, = , ,>2;' ,0' ;A, ;', @:' ';A, ;' ;' A,=' F ,?; ?,22@'
<' ?,E,2 @' UA, ;BEB G' ;AB' 0 D2B' = ,D<<' BD B ;' ;A, ;' $2, B'
A,=' <U B=' I%,' B ,J' A,E D' HBB ' ,2 <0;' ?< F2B;B2@' =B0; <@B='
' 6' #,?A' = E 0 < ' A,=' ,' H, ;;B @7' ;AB' D> 0:' < ' UA ?A'
%,' < , ,80' , @' A,=' HBB ' ,2 <0;' =B0; ;>;B' ' ;AB' 0F D:'
A,=' HBB ' 0>FF2 B=' < ' # D2, =:', ='2, =B=', ;' < > ,' => D'
;AB' 0> B 6

$>;' ;AB' (,2 ? , ' = E 0 < 0:' ;A<>DA' ;AB' <0;' > B <>0:' UB B'
<;' ;AB' < 2@' > ;0' UA ?A' UB B' ;<2=' < ;8;<' ;AB' BU' K @' < ' ;AB'
%B ;68' 0;> ,0' A,=' HBB ' BB' < ' E,=B 0' 0 ?B') B@', ='$< B;'
B; B=' < ' ;0' H< =B B' ' C> B' 56' AB' B ; ,2' C> ; ,'
< =B B=' $,22,0;B <0' ;<' N< ' ;AB' , ' , @' U ;A' ;AB' BU' BD>2, '
; <<F0' ' ;AB' F ? F,2 ;@:' , =' ;B ' H, ;;,2 < 0' < ' ;AB' 2<?,2'
E<2> ;BB 0:' ,' < ?B' < ' <EB ' 5: ' B 6' 2 B' 0;> , ' C> ; ,:'
,2U,@0' EB @' 0B2 0A' , =' F, ; ?>2, 0;' ' ;0' , 0:' ,=B' 0< B'
F <;B0;0' H>;' <HB@B=6') B' < ' ;0' 2B00' B ? B ;' BD B ;0' UB B'
2B ;' HBA =' ;<' U, ;?A' $< B;6

" ,22@' ;AB' *> B' *B2' +, M>B' A 0B2 ' A,=' HBB ' ?<22B?; D'
B0A' 2BE B0' ,H<>;' >=,=' <= D<:' UA 2B' ;AB' F2, 0' < ' %B< ' 2,@'
_,H, =< B=' H@' ;AB' " B ?A' => D' ;AB' ,H0B ?B' < ') B@80' ?< F0'
' ;AB' E,22B@' < ' ;AB' ,D>06' ??2>= D' ;AB' D, 0< ' < ' <= D<'
AB' A,=' 5: ' B :', 22' ' BU' > ;0' 0,EB' < B' <2=' 2 B' H, ;;,2 < '
, =' < B' <2=' 2 ; ,' BD B ; * B=>?; D' ;AB' : ' B ' UA ?A'
AB2=' ;AB' < ; B00:' ;AB B' UB B' 0BEB ' H, ;;,2 < 0V B, 2@' P: '
H,@< B;0V, =' ,' 0M>,= < ' < ' ;U<' < ' A< T0B' ,E, 2,H2B' < ' ;AB'
0; B D;AB D' < ' ;AB' B2=', @6' AF0B' UB B' <U' ;<2=' < ' ,0'
;AB' K ;A' * E 0 < ' < ' ;AB' @' < ' ;AB' %B ;8 7' ;A, ;' < ' $,22,0;B <0'
U,0' > HB B=' ;AB' =' * E 0 < 6

AB' (,2 ? , :' 0;> , :', =' %B< B0B' = E 0 < 0' A,=' HB;UBB '
;AB ' 2B00' ;A, ' ' A< 0B B 6' <' , B' >F' < ' ;A 0' =B0; ;>; < '
;AB' B ; ,2' C> ; ,' = B?;B=' ;AB' *> B' < ' 2H>M>B M>B' ;<' 0B =' < ;8
;<' >=,=' <= D<:' E ,' ;AB' +< ;>D>B0B' < ; B :', ' H D,=B' < ' A 0

1 < < ;B' =B%B <0:' . <2> ; , <0=B' 2,' 1 >B ;B:' %,' ' < :' %<EB ,:' 1 ,?B=,:'
1 < ,RR<6

T "<' ;AB' >22' >0;B <22' < ' *B2' +, M>?80' , @' ' ?;<HB :' 0BB'
FFB = W' <6' O6

TT < B' 0 ,22' ,?; < ' < ' ;' B,FFB, B=' ' ;AB' ?, F, D ' < ' 56

^ B' H, ;;,2 < ' < ' 1 ,N< ?,:' , =' ;AB' 1 2 ; ,' H, ;;,2 < ' < ' BD<E ,6

DC E & ? ? 3 (3 > / (! "#1 A

?, E, 2 @ ??< = D2@ ;AB + ?B< D2< , , ?AB= < ;A U ;A ;A BB BD B ;0 \< 2@ : 0, H B0 , 22: , =N< B= * B2 + , M>B < BF; B HB 6 A>0 , ; ;AB B = < ; A, ; < ;A ;AB K @ < ;AB % B ; 8 > HB B= B, 2@ : B V, 22 , ; @ 0, EB : A< 0B , = : D> B 06 $>; ;AB@ UB B 0?, ; ; B B= , 22 <EB) < ;A & B0; B F, : < E B=< ;< 0; < D, : , = < 0; < D, ; ;< >=, = <= D<: , = A, = ;< HB ?< ?B ; , ; B= HB < B ;AB@ ?<>2= , ?; 6) < U, 0 ;AB ?< ?B ; , ; < =BE< = < = , DB : < ;AB " B ?A DA; , 22 >F< ;AB 0; > , 0 < ;AB %B< B0B HB < B ;AB@ A, = N< B= ;AB (, 2 ? , , H<=@6 0 , , ; ; B < , ?; ;AB : BEB ; << ;AB B2= < B , 00: < * B2 + , M>B 2B ; , = E 0 < > =B 1 , A@ ;< F <; B?; (, 2 ? , : , =: UAB ; ;AB0B BD B ;0 , = ;AB D, 0< < <= D<UB B =B=>?; B=: AB A, = H>; O : , 22: ??>= D 0 ? , = B < =B; , ?AY B ;6 A 0: BEB ; AB2B00: ?< 0; ; >; B= , < = , H2B < ?B V ; A, = HBB ; BW 0; B ?B ; C>2@: <>2; , =) B@ ?<>2= BEB ; A, EB , ?AB= , D, 0; & B22 D; < U ;A ;AB UA<2B 0; B D; A: , = ;AB , 2, EB , ?, F, D DA; A, EB A, = , <; AB B = 6 $>; ;AB ; <<F0 UB B < E, @ D M>, 2 ; @ V ;AB %B< B0B = E 0 < U, 0 , H0<2>; B2@ , U6 ;AB (, 2 ? , 0 A, = , ; ;<< , @ B? > ; 0 U ;A < 2@ ; U< < ; A08 ; , D ; ;AB , 0: ;AB #0; B , => , ? , E, 2 @ A, = , H, = B?< = < = 0, 0; B 06 DB B , 2 < DB >0 DA; A, EB , ??< F2 0AB= 0< B; A D U ;A ;AB @ < ; ;AB %B ; V H>; * B2 + , M>B: ; A<>DA < B ?, >; <>0 ; A, , @ < A 0 ?< FBB 0: U, 0 < DB >06

AB C> ; , A, = , =BBF2@ <<; B= <; < ;A, ; 0> ? B ; F B0Y 0> B UB B , FF2 B= ; < & B22B02B@ , = & B22 D; < : ;AB@ U<>2= FB ; $B B0 < =80 +< ; >D>B0B , @: <U 0< B : 0; < D: ; < N< * B2 + , M>B < ;AB , =E, ?B ; < ;AB F2, 0 < %B< 6 AB@ A, = 0; , B ; AB B 6 & B22 D; < B; > B= , 0 FB B FY ; < @ , B >0, 2 ; < ;AB BM>B0; < ;AB , = < ;AB +< ; >D>B0B ; <<F0 , 0 ; < ;AB =B , = ; A, ; A 0 <U $; 0A , @ 0A<>2= , =E, ?B U ;A 2H>M>B M>B ; < ;AB , D>0

) <; A AD ?<>2= HB < B A, R, =<>0 ; A, ; AB F2, , 22@ < >2, ; B= , ; ;AB BE 22B & , ?B < ;AB 0 >2; , B<>0 , =E, ?B

$< H< : , D> ; <: , = (, , =B <0 =B %2B B , : 0, H B0 ?; <HB 6 AB0B BD B ;0 A, = BU2@ BN< B= ;AB #0; B , => , , @ < ;AB B, 6

T BB & B22 D; < ; < & B22B02B@: < $, =, N<R: ?; 6 : 56

D2 E & ? ? 3 (3 > / (! "#1 A %

BH,0; , 0>FF< ; D A , ; <2B=< , = , N>BR:) B@ , ;
,2, , ?,: * B00<22BO , =;AB <@,2 (>, =,O ,?B ; ,2 B0B EB
;AB ?,F ;,26 A O 8U,O ,F> B2@ =B B 0 EB F<0 ; < : , =
C<0BFA ;B =B= ;< B; , ;: ; 22 ;AB ,00BO < ; <<FO < (B , @: U ;A ;AB # FB < A 0B2 FB ?A, ?B ,; ;AB AB,=:
0A<>2= ?< B >F ;< A O , =6 ;= <BO <;0BB ;< A,EB B ;B B=
;< A O AB,= ;A,; ;AB B B @ U<>2= ,D, ;, B ;AB < B 0 EB:
, ;B ;AB ,0?< < ;AB ,2,EB ,?, F, D : , =;AB H2<<=@ 2B00< <
2 < ,? =6

BF;B HB , =;AB B, 2@ =,@O < ?;<HB ;AB " B ?A
A, =2@ <EB= ,; ,226) B@ 2B ; A O ?< FO , ; ,2, , ?,: , =
UB ; < ,0A< ; 2B,EB ;< +, O < BF;B HB / J 0< 2 ;;2B U,O
, @ =, DB BWFB?;B= ;AB F2, O < %B< 6 AB ?A, DB < ;AB
P;A ?< FO U,O A, =B= <EB ;< 1, ?A, =: A O 0B < = E 0 < ,2
DB B ,26 AB B U,O , BEB < B F< ;, ; ?A, DB < ?< Y
, = FB = D V C<> =, A,= HBB 0<2 ? ; D FB 00 < ;< B;> ;< " , ?B BEB 0 ?B C>2@6 B A,= HBB < BW?B22B ; ;B O
U ;A 9 D C<0BFA: H>; <> = ; A, = ;< BW,?; <HB= B ?B ;AB , 0A,20 V =BB= AB U,O DB B ,22@ B D,DB= ,?< ; <EB 0@
B ;AB U ;A . ?;< < U ;A <>2;6 AB # FB < U,O <;
?2 B= ;< ,22<U A ;< M> ; F, : H>; C<> =, BF; 0B = D
, FF2 ?,; < O ;< HB 0>FB 0B=B=: H,? B= H@ B= ?,2 ?B ; ?,;BO
,O ;< A O =, DB <>O 0;,;B < AB,2;A6 " ,22@ AB U,O D , ;B=
2B,EB ;< B;> : H@ ,2B;;B UA ?A B,?AB= A < ? ;<HB / J
N>0; ,O ;AB BU ?, F, D U,O HBD D ;< =BEB2<F ;< , ,?>;B FA,0B6 $>; AB D2,=2@ A, =B= <EB A O =>; BO ;< <>2;:
UA< ;A>O HB?, B K ,N< DB B ,2 8 < ?A B < ;AB ;, ;< 9 D
C<0BFA: , = =BF, ;B= U ;A<>; 2 DB 8 D < B2>?;, ?B < " , ?B:
D2,= ;< HB M> ; < , <0; E = <>O < ?B

$B < B C<> =, 8O =BF, ;> B ;AB B A,= HBB 0< B 0 ,22 <EBY
B ;O < ;AB " B ?A ; <<FO AB, D E,D>B > <> O < ;AB
F,00,DB B,0;U, = < #D> ,8O , @6 9 D C<0BFA < =B B= ,
?< B0F< = D 0A ; < A O <U ; <<FO ;<U, =O ;A,; M>, ;B 6
<>2; , = ;AB = < FO UB B < =B B= < +2,0B ? , ;< <FB0,
, = ,2,EB ,: ;AB B B2 BE D 1 < ; B , = ;AB P;A < FO: UA<
UB B ;< F>0A >F ;AB ,D>O ;<U, = <2B=<6 A O U<>2= B ,H2B
. ?;< ;< ?,22 >F BH,0; , 8O ?,E,2 @ , = ;U< < A O ,W @
= E 0 < O < <2B=< ;< %, 1, ?A,6 ,E D ;A>O D<;
8 "< C<> =, 8O FB 0< ,2 E BU0: 0BB A O % %(B=6 (<>?A@: F6 6

;<DB;2 B 8 0< B : B :. ?;< ,=E, ?B=; <* , B2:, = F B00B= ;AB ,=E, ?B= F<0;0 < ;2 B , F, 0A , @ < ?;<HB 6 #D> ,: UA< U,0 0; 22 ;B F< , @ ?< , =: 0 ?B B R,D,A,= <;@B;, EB=: ,=B < ,;;B F;;<0;, =: H>;B; B= ;<;AB F,00B0 < ;AB B ,1 < B ,6 A 0 ,FF, B ; ; =;@ < ;AB B B @ ?< E ?B=; AB 1 , 0A;= ;A,; <;A D =, DB <>0 U,0 < A, = ;A 0 M>, ;B 6 B = BU H,? A 0 , @ ;<?, ;< B ;0: ,0B ? ?2B < <2B=<;<, , ?< : 2B,E D;AB ?,E,2 @ < 1 2A,>= , = +, 0 <>;; A 0 < ;6) <;A D < B A,[JNJB B= %,1 , ?A, < ,<W; DA;6 H>;; < ;AB <;AB U D: ;AB D=< < %B< : ,;;B 0 ?, B ;<, AB,= 0<< B 6 H<>;; ;AB ==2B < BF;B HB ;AB H>2 < ;AB (,2 ?, , @: ;AB = E 0 < 0 < %<0,=,: $B2EB=B , = %, , B ,: A,= <EB= =<U ;AB +< ;>D>B0B < ; B E, 2?, R,0: , =N< B= * B2 +, M>B , ;>=,= 22<= D<6 ;AB ;UB ;@ ;A < ;AB 0, B < ;A ;AB + ?B < D2< ,: U ;A ;AB ?,E,2 @ H D,=B < #0; B ,=> ,: ,20<?, B ;<> ;B A 0B2 ;<; AB @ < ;AB %B ;6 * B2 +, M>B A,= ;A>0 : , ; @ , = : A< 0B ?< ?B ; ,;B=6 B A,= 0; 22 ;< HB N< B= H@ $,22,0;B <0 , = ;AB 0;> , 0: UA< A,= ;< F ? ;AB U,@ U ;A ?,>; < ;A <>DA ;AB F2, 0 < %B< 6 1 ,A@ , = ;AB O;A = E 0 < < ;AB (,2 ?, 0 A,= HBB 2B ; ;AB F,00B0 ,H<EB 0;< D,: ;< ?<EB ;AB A DA <,= ;< (,2 ?,6 B A,= ,E, D>, = 0;< D,: > =B , ;<? 2=B0: , = ;AB ;<U : UA<0B U,220 A,= HBB BF, B= H@ ;AB < =B < %, < , ,: U,0 <U ?,F,H2B < , D 0< B =B B ?B6

",? D * B2 +, M>B , = A 0 2 B>;B , ;0 ;AB B UB B ;U< = 0; ?;; < ?B06 AB P;A < F0: <U > =B 1 , ?A, =: U,0 ?< ?B ; ,;B=; ,; ,2, , ?,6 ,E D B?B EB= BU< < <= , ;0 0 ?B ;0 B;> < (,2 ?, ; U,0 ,;AB UB, ;0 ;UB ;@ < B H,;;,2 < 0 , = <> ?,E,2 @ BD B ;0 < 2@ ?<> ;B= ,; ;AB B = < BF;B HB 0< B : H,@< B;0 , = : 0,H B0 B B?; EB V ;AB 0 ? HB D > B <>06 ;AB < ;A < < , = 2= ,0; 2B 9B22B , U,0 ?A, DB: U ;A , =BFB =B ; < ?B< < <D B,; 0; B D;A6 A 0 <U = E 0 < < = ,D<< 0: B, 2@ : 0,H B0: U,0 ;0 < 2@ < =,H2B > ;6 AB , ; @ U,0 ?< F<0B= < ;A BB U 00 H,;;,2 < 0: , = <> < < EB " B ?A H,;;,2 < 0: UA ?A A,= HBB 2B ; D, 0< 0 2= ,0; 2B UAB ;AB BB ;AB ;,H2B D EB H@ FW >D2 < F6 P < H 0 %(

4P$ #$ ' ' 1)$ 1 + ( )$ "$ 5$ A $!"

BD B ;0$;<$ UA ?A$;AB@$ HB2< DB=$ UB ;$ 0<>;AU, =$ $;AB$ F BY ?B= D$ U ;B 6 AB$ UA<2B$ = =$ <;$, <> ;$;<$ < B$;A, : $ H,@< B;06 AB$ = ,D<< 0$ UB B$ EB @$ 0B E ?B,H2B$ $;AB$ E,0;$ F2, 0$ < $ %B< :$ H>;$;$ U,0$ U ;A$ = ?>2;@:$, =$ < 2@$ H@$?>;; D$ =<U $ D, 0< 0$;<$,$ =, DB <>0$ BW;B ;:$;A,;$ 9B22B , $?<>2=$,00B H2B$,$ UB, $, ; @$ H D,=B$ < $: $ B $;<$ H,? $;AB$ A< 0B B 6

;$ U,0$ BEB ;AB2B00$ < $ 9B22B , 80 0 =B:$, =$ H@$;AB$; , ; EB$ < $;AB$ " B ?A:$;A,;$;AB$ 0;$?2,0A$;<< $ F2,?B$ $ < ;A UB0;B $ F, 6 B, D$ E,D>B$ BF< ;0$ < $;AB$ <EB B ;$ < $;AB$ (,2 ? , $ = E 0 < 0$;<U, =0$ >=,=$ <= D<:$ B22B , $ 0B ;$ (B B ,2$, B:$ U ;A$;U<$ BD B ;0$ < $ = ,D<< 0$, =$: $, ; @:$;<$ <??>F@$ 0;< D,:$ HB D$ D < , ;$,FF, B ;2@$;A,;$;$ U,0$ <U$ D, 0< B=$, =$ < B$ < $ 2B00$ < ; B=6 , B$ <> =$;AB$ F2,?B$ <??>F B=:$,=B$,$ UB, $, ; ; ,? $ >F< $;$ < $?;<HB $ 5:$, =$ U,0$ HB,;B $ < 6 B$ U,0$,H2B$;<$ BF< ;$;<$ A 0$?A B $;A,;$;AB$ F, , =0$ I 6$ B6 1 ,A@80$ = E 0 < J$ UB B$ $ 0< B$ < ?B$ $;AB$ F,00B0$ HB@< =6

;$ >?A$;AB$ 0, B$ < B ;$;A,;$;A 0$,?;$ U,0$,0?B ;, B=$ * B2$ +, M>B$ HBD, $;<$ <EB6 AB$ A,=$ HBB $ 2@ D$ 0 ?B$ BF;B HB $ O$,;$ ">B ;B$ (> ,2=<$ $;AB$ A DA2, =$,H<EB$ >=,=$ <= D<6$ $?;<HB $ $ AB$,=B$, $,=E, ?B$,0$, $,0$, , B0:$ < $;AB$ H@ <,=$ < $ <= D<$;<$,2, , ?,$ UA ?A$ 0 ;0$;AB$ <> ;, 0:$ U 0B2@$,E< = D$;AB$ A DA <,=$ $;AB$ < B$ 2BEB2$ D <> =$ H@$, $ 1, ; $ =B2$ <$, =$,0; BN< 6 B$ A,=$ U ;A$ A $ A 0$;2>8BB$ (,2 ? , $ = E 0 < 0$, =$ A 0$: $ A< 0B:$ H>;$ AB$ A,=$ <;$ H <>DA;$ < U, =$ A 0$,U$ %B< B0B$ = E 0 < $ > =B $,0; < >BR=B:$ UA ?A$ 0; 22$ 2,@$ H@$ <= D<6 $ AB, D$ < $;AB$ => B80 ,=E, ?B$ 1, ?A, =$ 0B ;$ <>;$ B?< , 00, ?B0:$, =$ A,E D$ = 0?<EB B=$;AB$ F<0 ; < $ < $;AB$ F, , =0:$ B0<2EB=$,;$ < ?B$;<$,;;,? $;AB 6 $?;<HB $ 4$ AB$ 0;, ;B=$ <>;$ < $,2, , ?,;$;, D$ U ;A$ A $ A 0$ UA<2B$?< F0:$ BW?BF;$;AB$;U<$ H,;;,2 < 0$ < $;AB$;A$ BD B ;:$ UA ?A$ UB B$ 2B ;$;<$ D, 0< $;AB$;<U 6

$;AB$, ;B << $ < $;AB$ BW;$ =,@$ 1, ?A, =$?, B$ $ 0 DA;$ < $;AB$ B B @:$ UA<$ U,0$ = ,U $ ' C B,=@$;<$ B?B EB$ A $ < $;AB$ AB DA;0$,H<EB$, , B06 AB$ " B ?A$ DB B ,2$ A,=$ U ;A$ A

$ FF, B ;2@$ 9B22B , $ A,=$,;$;A 0$ < B ;$,$ H,;;,2 < $ B,?A$ < $;AB$ =:$ =:$, =$ O;A$ U 00:$,$ H,;;,2 < $ < $;AB$ (, =B$ =B$ +, 0:$ < B$ B,?A$ < $;AB$;A$ %B DB $, =$ =$ % B:$, =$ < B$ < $;U<$ < $;AB$ =:

B;BB ' H,;;,2 < 0:' 0< B' : ' H,@< B;0' VA 0' : 'A< 0B:', =' <> ;BB ' D> 06' *B2' +, M>B' A,=' : ' (,2?, ' , ; @:' D2< ,80' ?,E,2 @:' , =' B DA;BB ' D> 0G A 0' F<0 ; < ' U,0' 0< 0; < D:', =' 0' 0>FB < ;@' ' , ; @' 0<' , B=:';A,;' AB' U,0' F <H,H2@'N>0; B=' ' 0 D',' H,;;2B' < ';AB' =B B 0 EB6

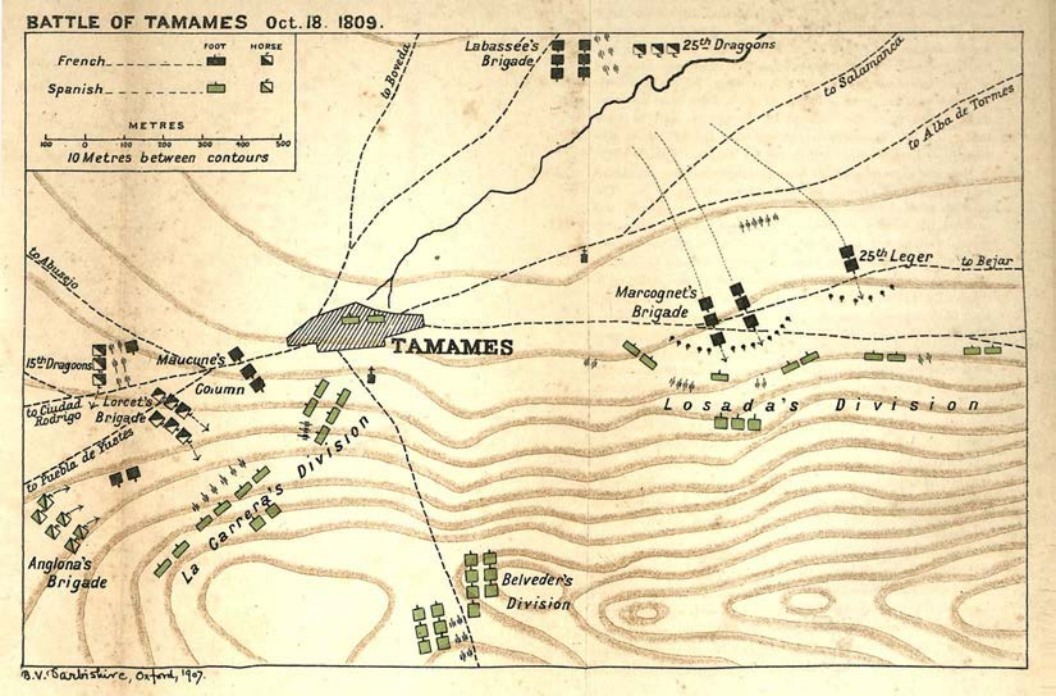
, , BO:', ' > U,22B=' E 22,DB' < ' <=B ,;B' 0 RB:' 2 BO' ,;' ;AB' <<;' < ',' , DB' < ' 0UB22 D' A 2206' ;0' 0; ,;BD ?,2' F< ;, ?B' 2 BO' ';AB' ,?;' ;A,;' ;' 0' ;AB' BB; D F2,?B' < ';AB';U<' ?<> ; @' <,=0' < ' >=,=' <= D<';<' ,2, , ?,'2 ' 1,;22,:', =' < ' >=,=' <= D<';<' $BN,', =' ;AB' +,00' < ' $, <0' 2 '),E,' B=< =,6' +2,?B=' ;AB B:' *B2' +, M>B80' , @' ;A B,;B B=' ,2,Y , ?,:', =' A,=',' ?A< ?B' < '2 BO' < ' B; B,;:';AB' <,=0';<' <= D<' , =';<';AB' F,00BO' ;<' #0; B ,=> ,' HB D' H<;A' <FB 6' $>;' B; B,;' U,0' <;' ;AB' => B80' ;B ; < 6' B' A,=' = ,U ' >F' A 0' , @' < ';AB' AB DA;0' ,H<EB' , , BO:' <??>F@ D' ;AB' E 22,DB' HB2<U' U ;A' ,' H,;;,2 < ' < ';U<6' ';AB' DA;:' UAB B' ;AB' A 220 =B' U,0' 0;BBFB :' AB' A,=' F2,?B=' %<0,=,' , =' ;AB' =' * E 0 < G < ' ;AB' 2B ;:' UAB B' ;AB' =DB' 0 0' =<U ' DB ;2@' ;<' ;AB' F2, :' U,0' 1, ; '=B' 2,' , B ,' U ;A' ;AB' ., D>, =' * E 0 < 6' AB' < =B' =B' $B2EB=B 80' = E 0 < V ;AB';A =V < B=' ;AB' B0B EB:', =' U,0' = ,U ' >F' < ';AB' BEB 0B' 02<FB:' HBA =' %,' , B ,6' AB' + ?B' < ' D2< ,80' ?,E,2 @' H D,=B' U,0' <>;' < ';AB' BW; B B' 2B ;:' F, ;2@' A ==B ' H@' U<<=0:' ';AB' 2<U' D <> =' HB@< =' ;AB' 2, ' < ';AB' ., D>, =6

1, ?A, =:', E D' < ';AB' D <> =' ';AB', ;B <<' , ;B ',' , ?A' < ' <> ;BB ' 2BO' < ' 1,;22,:' U,0' <EB N<@B=';<' 0BB';AB' B B @' < B D' H,;;2B:', =',;;,? B=' U ;A<>;',' < B ;80' AB0 ;,Y ;< 6' 0' , , DB B ;0' >?A' B0B H2B=' ;A<0B' < ' . ?;< ' ,;' ' ??B0 V ;A<>DA' A 0' 2>? ' U,0' ;<' HB' EB @' = B B ;6' ;' U,0' ??B, ';A,;' ;AB' F, 0A' 2B ;' U,0' ;AB' UB, ' F< ;:', =' ;A,;' ;AB' AB DA;0' ?<>2=' HB';> B=' , =',0?B =B=' < ';A,;' 0 =B' U ;A' B,0B6 ??< = D2@' 1,>?> B80' H D,=B' I0 W' H,;;,2 < 0' ',22J' ', =' ;AB' 2 DA;' ?,E,2 @:' 0; B D;AB B=' H@' < B' BD B ;' < ' = ,D<< 0:' UB B' < =B B=' ;<' ,8?A' < ';<' ;AB' DA;:';<' < ' ',' 2 B' FB FB = ?>2,';<';A,;' < '* B2' +, M>B:', =' H B,' =<U ' A 0' 2, 6' & AB ';A 0' <EB B ;' U,0' UB22' =BEB2<FB=:' 1, ?<D B;80' H D,=B' I0 W' H,;;,2 < 0J' ' U,0

T P;A' %BDB ' I;U<' H,;;06J:' P5;A' % B' I;A BB' H,;;06J:', =' < B' H,;;,2 < ' < ' 2 3' 5%: (' %: (

C 5;A', =' 4P;A' < ';AB' % B6

4 ' # ' ' 1) ' 1 + ( ) ' "' 5' A '
;<' , ; ; , ? ' ;AB' F, 0A' ?B ; B:' ;<' ;AB' B, 0;' < ' ;AB' E 22, DB' < '
, , B0:' UA 2B' ;AB' ;A' %BDB ' I;U<' H, ; ; , 2 < 0J' U, 0' ;<'
?< ; , ' ;AB' A<0; 2B' DA;' H@' ,' =B < 0; , ; < ' , D, 0;' ;AB' A DA'
, =' = ?>2;' D <> =' ' ;A, ;' = B?; < 6' 1 , ?A, =' BF;' '
B0B EB:' HBA =' A 0' ?B ; B:' ;AB' 4;A' , =' 5;A' < ' ;AB' % B' I0 W'
H, ; ; , 2 < 0J' , =' A 0' B , D' BD B ;' < ' = , D<< 06' AB' E ?B'
< ' ;A 0' < , ; < ' U, 0' ;A, ;' ;AB' 0; D' < ?B V 1 , >?> B80'
?<2> V U, 0' ;<<' UB, ' G ;' U<>2=' A, EB' HBB ' U 0B' ' ;<' A, EB'
0; B D;AB B=' ;' , ;' ;AB' BWFB 0B' < ' ;AB' ?B ; B:' , =' ;<' A, EB'
, =B' ,' B B' =B < 0; , ; < ' , D, 0;' ;AB' AB DA;0' , H<EB' ;AB'
E 22, DB' < ' , , B0:' , 0' UB22' , 0' < ' ;AB' BW; B B' " B ?A' 2B ;6
1 , >?> B' , ??< F2 0AB=' A 0' 2, ' , ?A' > = 0;> HB=:' =BF2<@B='
' < ;' < ' %, ' , B , 80' 2B ;' , =' , =E, ?B=' , D, 0;' ;6' AB'
F, 0A' DB B , 2' ;A BU' H, ? ' A 0' U D' ;<' F <; B?;' A 0B2 :' , ='
< =B B=' A 0' ?, E, 2 @' ;<' ;A B, ;B ' ;AB' 2, ' < ' ;AB' , =E, ? D'
< ?B6 $>;' AB' U, 0' B, 2@' 0UBF;' , U, @G UAB ' ;AB' 0 0A D'
2 B0' UB B' ' ?< ; , ?; :' ;AB' " B ?A' H D, = B ' < =B B=' A 0' ?, E, 2 @'
;<' ?A, DB' ;AB' ?B ; B' < ' ;AB' F, 0A' = E 0 < G 0; D' '
= , D< , 22@:' %< ?B;80' >00, 0' , =' A, 00B> 0' H < B' %, ' , B , 80'
2 B:' , =' ?, F;> B=' ;AB' 0 W' D> 0' < ' A 0' = E 0 < , 2' , ; 22B @6
2 <0;' , ;' ;AB' 0, B' < B ;' D2< , 80' ?, E, 2 @' ?, B' ' >F< '
1 , >?> B80' 2, 7' H>;' HB D' <FF<0B=' H@' ;U<' H, ; ; , 2 < 0' < ' ;AB'
P5;A' ' 0M>, B:' ;AB@' B?B EB=' H>;' < B' B' , =' 2B=' A, 0; 2@' ;<' ;AB'
B, 6' 1 , >?> B' ;AB ' B0> B=' A 0' , ?A' >F' ;AB' A 22:' ?<EB D'
A 0' 2, ' U ;A' A 0' A< 0B B :' , =' F>0A D' %, ' , B , 80' H < B '
2 B' HB < B' A 6' $>;' , ;' ;AB' AB, =' < ' ;AB' 02<FB' AB' B;' $B2EB=B 80'
B0B EB:' UA ?A' 2B;' ;AB' H < B ' ; <<F0' F, 00' ;A <>DA' ;AB ' ;B E, 20:'
, =' ;<< ' >F' ;AB' DA;' 0;B, = 2@' B <>DA6 AB' " B ?A' UB B' <U'
<FF<0B=' H@' ; F2B' > HB 0:' , =' ;AB' ?< H, ;' ?, B' ;<' , ' 0; , =0; 22G
1 , >?> B80' < B 0 EB' F<UB ' U, 0' BWA, >0; B=:' , =' AB' ?<>2=' <'
2< DB ' >0B' A 0' ?, E, 2 @' < ' ;AB' 0; BBF' D `> =' UA ?A' AB' A, ='
B, ?AB=6
1 B, UA 2B:' < ' 0BB D' ;AB ' DA;' H D, =B' <FB D' ;AB' ?< H, ;'
U ;A' 0>?A' 0>??B00:' ;AB' ;U<' <;AB ' " B ?A' ?<2> 0' UB ;' < U, =:'
1 , ?<D B;' , D, 0;' ;AB' F, 0A' ?B ; B:' 0B2 B' < ' ;AB' ;A' %BDB '
, D, 0;' ;AB' BW; B B' DA;6 $>;' ;AB' D <> =' U, 0' AB B' >?A'
0; BBFB G %<0, =, 80' (, 2 ? , ' = E 0 < ' 0; <<=' ;0' D <> =' EB @'
0; B, = 2@:' , =' 1 , ?<D B;80' ;U<' BD B ;0' , =B' , ' E<2> ; , @'
A, 2;' ;A BB M>, ;B 0' < ' ;AB' U, @' >F' ;AB' AB DA;0:' > =B ' ;AB' >22


BATTLE OF TAMAMES Oct. 18. 1809.
FOOT
HORSE
French
Spanish
METRES
100 0 100 200 300 400 500
10 Metres between contours
to Boveda
Labassée's Brigade
25th Dragoons
to Salamanca
to Alba de Tormes
to Alsasua
25th Leger
to Bejar
Marcognet's Brigade
TAMAMES
15th Dragoons
Maucune's Column
to Ciudad Rodrigo
Lorcet's Brigade
to Puebla de Yeltes
La Carrera's Division
Losada's Division
Angiona's Brigade
Belveder's Division
B.V. Sandistaire, Oxford, 1907.

BS <S;ABS;US< F, 0AS H,;;B B0S;AB BS F2,?B=S , =S;ABS2< DS2 BS <S , ;@6S ABS< ?B 0S ,=BS 0BEB ,2S =B0FB ,;BS ,;;B F;0S;<S =>?BS;ABS?<2> 0S;<S B0> BS;AB S ,=E, ?B:S H>;S;<S <S B B?;6S AB@S B22S S D B,;- > HB 0:S , =S ,;S 2,0;S;ABS BD B ;0S B?< 2B=S , =S =B0?B =B=S;ABS A 22S S = 0< =B 6S %<0,=,8 0S H,;;,2 < 0S F> 0>B=S;AB S;<S;ABS <<;S < S;ABS 02<FB:S , =S;ABS F, 0AS 2 DA;S; <<F0S S;ABS E 22,DBS 0,22 B=S <>;S >F< S;AB S 2, :S , =S ?< F2B;B=S;AB S <>;6S 1 , ?<D B;8 0S H D,=BS F<> B=S =<U S ;<S;ABS F2, S ,0S ,S = 0< =B B=S ,00S < S >D ; EB0:S , =S UB BS < 2@S 0;,@B=S UAB S 1 , ?A, =S H <>DA;S >FS;ABS 4;AS , =S 5;AS ;<S;AB S B0?>B6S * B2S +, M>BS U 0B2@S A,2;B=S;ABS F> 0> DS < ?BS HB < BS ;S ?, BS ;<S ?< ;,?;S U ;AS;ABS " B ?AS B0B EB0:S , =S ;<< S >FS ,D, S A 0S F<0;S < S;ABS AB DA;06

1B, UA 2BS;ABS ;AS %?DB :S < S;ABS BW; B BS " B ?AS DA;:S A,=S <;S F B00B=S ;0S ,;;,? S A< B:S , =S B; B,;B=S UAB S ;ABS ?B ; ,2S ,=E, ?BS U,0S BF>20B=6S 1 ,>?> B:S ;<<:S 0BB DS ;ABS <>;S ;<S A 0S 2B;:S U ;A= BUS < S ;ABS AB DA;0S > =B S ?<EB S < S A 0S ?,E,2 @:S ?, @ DS < S < 2@S < BS < S;ABS F, 0AS D> 0S ;A,;S ABS A,=S ;, B S B, 2@S S;ABS DA;:S , =S 2B,E DS S B;> S ,S = 60,H2B=S F B?BS < S A 0S <U S < S;ABS A 226

ABS H,;;2BS U,0S , 2@S 2<0;:S , =S 1 , ?A, =S B; B=:S > =B S ?<EB S < S A 0S ?,E,2 @S ,2< DS;ABS ,2, , ?,S <,=6S ABS B B @S ,=BS <S 66OB <>0S ,;;B F;S;<S F> 0>BS A S S;ABS F2, :S UAB BS A 0S A< 0B B S U<>2=S A,EBS HBB S ,H2BS;<S ,?;S U ;AS,=E, ;,DB6S ABS " B ?AS A,=S 2<0;S : S < S :O S B :S ??>= DS S < ?B 0S 22B=:S , =S ,S DB B ,2 I%< ?B;JS, =S OS < ?B 0S U<> =B=S), ?<D B;8 0S H D,=BS 0>FF2 B=S;ABS D B,;B S F, ;S < S;ABS ?,0>,2; B07S;ABS 4P;AS 2<0;S ;0S B,D2B:S 0BEB S < ?B 0S 22B=S , =S ;BB S U<> =B=7S;ABS 5;AS ,2 <0;S ,0S , @6S ABS ?,E,2 @S , =S 1 ,>?> B80S H D,=BS 0> B B=S 2 ;;2B6S ABS EB @S <=B ,;BS F, 0AS 2<00S U,0S 4 S 22B=S , =S U<> =B=:S <0;2@S S %,S , B ,8 0S = E 0 < 6

A 0S U,0S ;ABS 0;S DB B ,2S ,?;< S 0 ?BS $,@2B S S UA ?AS;ABS F, , =0S D, B=S ,S ?< F2B;BS E ?;< @6S AB@S A,=S ,S 0>FB < ;@S < S,H<>;S 0BEB S ;<S <> S S > HB 0:S , =S ,S D<<=S F<0 ; < S7S BEB Y ;AB2B00S;ABS ; <<F0S UB BS 0<S ,U:S , =S;ABS F,0;S B?< =S < S;ABS @

I S 1 , ?A, =S S A 0S = 0F,;?AS 0,@0S : S B S S ,22S UB BS 2<0;:S , =S ,S D> S 7S ABS , B0S <S B ; < S < S;ABS B,D2B6S 0S , =B =B ?, F:S F D2 :S UA<S A,0S ,S D<<=S ,??<> ;S < S;ABS H,;;2BS S A 0S % %(IFF6S 4 J:S D EB0S;ABS ;<;,2S < S :P 6S ABS F, , =0S BW,DDB ,;B=S;ABS 2<00S;<S : 6

$B B0 < =8Ø ; <<F0' UB B' < =B B=' >F' ;<' ;AB' < ; B :' <;' 0<' >? ' ;<' 2B =' ,' < ,2' 0>FF< ;' ;<' * B2' + , M>B8Ø ,=E, ?B ' ,Ø ;<' HB' B,=@' ;<' =B B =' ;AB ' <U ' H< =B 0' ' ;AB' BEB ;' < ' A 0' =B B,;6' A<U D' < B' F >=B ?B' ;A, ' & B22 D;< ' A,=' BWFB?;B=:' * B2' + , M>B' = =' <;' F>0A' < U, 8=' < ' ,2, , ?,:' UAB ' AB' HB?, B' ?B ; , ' ;A,;' AB' U<>2=' A,EB' ;<' =BFB =' < ' A 0' <U ' < ?B0' ,2< B6' #EB ' , ;B ' ;AB' , E,2' < ' A 0' B0B EB0' < ' <= D<' AB' B , B=' M> B;:' < 2@' F>0A D' <>;' B?< , 00, ?B0' ;<' = 0?<EB ' UA ?A' U,@' ;AB' B B @' A,=' D< B6' B' A,=:' ' ,?;:' ?, B=' <>;' A 0' F, ;' ' ;AB' B ; ,2' C> ; ,8Ø F2, ' < ' ?, F, D :' H@' ?,22 D' ;AB' , ;;B ; < ' < ' ;AB' " B ?A' ;<' ;AB' < ;A:' , =' = 0; ,?; D' ; <<F0' ;A ;AB ' < ' ;AB' 9 D8Ø , @6' ;' U,0' <U' ;AB' ; B' < ' 2H>M>B M>B' , =' B R,D,' ;<' ;, B' >F' ;AB' D, B:' , =' B2 BEB' A 6' 1 , ?A, =' B, UA 2B' A,=' B; B=' ,? <00' ;AB' * <> <:' , =' ;, B ' >F' , ' BW;B =B=' 2 B' HBA =' ;' < ' 3, < ,' ;<' < =B0 22,0 V ,' < ;' < '<EB ' < ;@' 2B0 V UA ?A' ;' U<>2=' A,EB' HBB ' F<00 H2B' ;<' A<2=' U ;A' A 0' : ' B ' ,D, 0;' ,' AB,E@' ,;;,? ' =B2 EB B=' ,;' < B' F< ;6' $>;' AB' U,0' A, =2@' ' F<0 ; < ' UAB ' 9B22B , ' , EB=:' ;<< ' <EB ' ;AB' ?< , =:' , =' ?A, DB=' ;AB' UA<2B' F2, ' < ' ?, Y F, D ' I) <EB HB ' J6' B' A,=' 2B ;' ;U<' H,;;,2 < 0' ;<' D>, =' $B BEB ;B:' ;U<' ;<' A<2=' . ,22,=<2 =:' , =' A,=' < 2@' H <>DA;' >F' A 0' : ' = ,D<< 0' , =' : ' , ; @6' BB D' ;A,;' ;' U,0' ,H0<2>;B2@' B?B00, @' ;<' B?<EB ' ;AB' 2 B' < ' ?< > ?,; < ' & ;A' 1 ,= =:' AB' < =B B=' ;AB' P;A' < F0' ;<' 2B,EB' 3, < ,' , =' < <:' ,00' , ;' < =B0 22,0:' , =' ;AB ' ? <00' ;AB' * <> <' ;<' 1 B= ,' =B2' , F<:' ;AB' N> ?; < ' F< ;' < ' ;AB' <,=0' < ' 1 ,= =:' BD<E ,:' . ,22,=<2 =:' , =' < <6' <' ;A 0' 0, B' F2,?B' AB' H <>DA;' >F' A 0' <U ' 0 ,22' < ?B:' , =' A,E D' B?B EB=' (<= <;8Ø H D,=B' < ' 1 ,= =:' A,=' ;A ;@ <> ' H,;;,2 < 0' , =' B DA;BB ' 0M>,= < 0' ?< ?B ; ,;B=V ,H<>;' : ' B 6' A<>DA' <;' @B;' N< B=' H@' ;AB' <;AB ' ; <<F0' < ' ;AB' 0<>;A V B>=B2B;8Ø = E 0 < V AB' <U' , ?AB=' 0; , DA;' >F< ' ,2, , ?,' ' ;U<' ?<2> 0:' < B' H@' , ;,2,F B= ,:' ;AB' <;AB ' H@' ">B ;B' ,>?<:' ;B = D' ;<' < B ' H,;;2B' ;<' * B2' + , M>B6

$>;' ;AB' => B:' >?A' ;<' ;AB' 0> F 0B' < ' BEB @' < B:' >;;B 2@' B >0B=' ;<' DA;:' A<2= D' ;AB' F2, ' ;<<' =, DB <>0' < ' , ' , @' 0<' UB, ' ' ?,E,2 @' ,Ø A 0' <U :' , =' <EB B0; ,; D' ;AB' B B @80

5S 9 # %% # 1)) * . # $ 9 * # %+ ` ' #

< ?B , ; P: B B B; B= < , 2, , ?, : , ; B A, E D AB2= ; 2B00 ; A, , ; < ; DA; : <) <EB HB : , = ; << < <; ; AB < , = ; < >=, = <= D< H>; ; A, ; ; < $BN, , = ; AB + , 00 < $, <0: , 0 AB UB B::, H<>; ; < F, 00 ; AB <> ; , 0 ; < #0; B , => , 6 A 0 U, 0 , BW?B22B ; <EBG ; AB " B ?A ?<>2= <; F> 0>B A < ?B U ; A<>; BE, ?>, ; D 2= , 0; 2B , = %B< : UA ?A ; U<>2= A, EB HBB F<00 H2B < ; AB ; < ?< ; B F2, ; B6 " < UAB 9B22B , A, = ?< ?B ; , ; B= A 0 ; <<F0 ; < 0; B , ; , 2, , ?, : ; AB B U, 0 <; A D 2B ; HBA = A ; AB E, 0; >N=, = 0, EB , H, ; ; , 2 < < ; U< , ; $B BEB ; B: . , 22, =<2 =: , = $> D<06 1 , A@: < (, 2 ? , : , = ; AB 0; > , 0 DA; A, EB <EB > ; AB UA<2B BD < > <FF<0B=6 0 ; U, 0: ; AB UA<2B < ; AB F <E ?B0 HBA = ; AB * <> < 0A<UB= 0 D 0 < H> 0; D <>; ; < 0> B?; < 6 C>2 , , ?ABR: ; AB # FB? , =<: , = <; AB D>B 22B < ?A B 0: U2>L0B , B0 UB B 0<< ; < HB , <>60: , 0B= 2, DB H, =0 => D ; AB , H0B ?B < ; AB < , 2 D, 0< 0: , = 0UBF; ; AB ?<> ; @ 0 =B: ?; EF; > D ?< E<@0 , = ?>; ; D ; AB 2 B0 < ?< > ?, ; < HB; UBB . ; ; < , : $> D<0: , = . , 22, =<2 =6 +< 2 B ?, B =<U U ; A , 2@ D ?<2> < ; AB 0; > , 0: , 00, >2; B= + , 2B ? , : , = ; A B, ; B B= $> D<06 AB " B ?A D<EB < 60 < BEB @ 0 =B BF; BF< ; D ; AB FB 2<>0 F<0 ; < : UAB ; AB@ ?<>2= DB; , B00, DB ; A <>DA ; < 1 , = = T6

B, 2 R D ; A, ; AB >0; ?<EB A 0 B, : < ; AB UA<2B < 2= , 0; 2B U<>2= HB 2<0; ; < ; AB 0> DB ; 0: 9B22B , : , ; B <??>F@ D , 2, , ?, <) <EB HB P: 2B ; ; AB P; A < F0 , = (<= <; 8 H D, =B = 0; H>; B= HB; UBB %B=B0 , : , 2, , ?, : , = 2H, =B < B0: U, ; ?A D * B2 + , M>B: , = B; > B= A, 0; B U ; A A 0 <U ; <<F0 ; < ; AB * < >8<6 B ?< B ?B= ; < 0B = <>; 2@ D ?<2> 0 < . , 22, =<2 = ; < =B, 2 U ; A ; AB D>B 22B <0: H>; = = <; U< ; <<< , , B2=: 2B0; AB DA; HB ?, 22B= H, ? H@ , BU < U, = <EB B ; < ; AB F, ; < ; AB @ < ; AB %B ; 6 $>; , BU = , @0 AB A, = ; < B?, 0; , 22 A 0 , , DB B ; 0: < V , 0

B 60B ; ; 2 0 B0; , ; B ; < . B22 D; < : 0BB ; AB 2, ; ; B ; < $B B0 < =: $, =, N<R:) <E6 (6

2 B C> ; , , ; B U, =0 ?< ; B F2, ; B= H D D A =<U ; < N< 2H>M>B M>B: E , +2, 0B ? , : UA ?A U, 0 BB < " B ?A ; <<F0: 0 ?B <>2; A, = <EB= ; < <FB0, 6 $>; ; A 0 =<B0 <; 0BB ; < A, EB HBB ; A<>DA; < 0< B, 2@ , 0) <E6 P6

BB <>2; ; < 2, B: < 1 , = =:) <E6 (: < ; AB0B <EB B ; 06

O' #' ' ' 1)' 1 + ( )' "' 5' X) <E6'

* B2' +, 8M>B' A, =' ?, 2?>2, ;B= V ;AB' ?, F, D ' ' %, ' 1, ?A, ' A, =' N>0;' <FB B=:' , =' ;AB' F<0 ; < ' < ' ;AB' " B ?A' ' %B< ' , =' 2=' ,0; 2B' U, 0' F < <> =2@' , B?;B=' H@' ;AB' BU' =BEB2<F B ;06

' ;AB' 0<>;A:' ,0' UB' A, EB' ,2 B, =@' BWF2, B=:' ;AB' C> ; ,' =B0 D B=' 2H>M>B M>B8O' , @' < ' #0; B ,=> ,' ;<' HB' ,' B B' =B < 0; , ; D' < ?B:' UA 2B' B R, D, 8O' : ' B ' UB B' ;<' 0; B' ;AB' B, 2' H2<U6' AB' #0; B ,=> , ' ; <<F0:' ,0' U, 0' F <FB :' <EB=' B, 2@' ;<' = , U' ;AB' , ;; B ; < ' < ' ;AB' B B @6' 2H>M>B M>B8O' 0;' = E 0 < ' > =B ' $, 00B?<> ; V' P: ' , ; @' , =' P ' A< 0B V U, 0' < ' ;AB' , D>0' < ' 2 , , R' ;<' 1 BR, ' =B' H< G A 0' 0B?< =' = E 0 < ' > =B ' ;6' C>, ' , =' ;AB' B0;' < ' A 0' ?, E, 2 @ V 0< B' O: ' ', 22 V' UB B' <E D' >F' < ' >W 22<6' $, 00B?<> ;' HBD, ' H@:0B = D' ,' 0 ,22' < ?B' < ' ,22' , 0' , ? <00' ;AB' EB ' , ;' 2 , , R:' ;<' = EB' ' <>2;8O' <>;F<0;0' , =' 0F B, =' BF< ;0' , H <, =' ', 22' = B?; < 0' ;A, ;' AB' U, 0' , ?; D' , 0' ;AB' E, D>, =' ;<' & B22 D;< 8O' , @:' UA ?A' U, 0' , ?A D' >F' < ' $, = , N<R6' ' < ;> , ;B2@' ;AB' >22' B B?;' ;A, ;' AB' =B0 B=' U, 0' <;' F <=>?B=:' HB?, >0B' =B0B ;B 0' < B=' <>2;' ;A, ;' ;AB' $; 0A' @' U, 0' 0; 22' M> B0?B ;' < ' ;AB' (>, = , , H' AB' " B ?A' , =B' <' <EB B ;:' , =' 2B ;' ;AB' =' < F0' , 2< B' ;<' U, ;?A' 2H>M>B M>B6

1 B, UA 2B' B R, D, :' U ;A ' ,' BU' =, @0' < ' , 00> D' ;AB' ?< , =' < ' ;AB' , @' < ' %, ' 1, ?A, :' ?< B ?B=' A 0' < U, =' <EB B ;6' ') <EB HB' ' :' A, E D' ?< ?B ; , ;B=' A 0' B DA;' = E 0 < 0' < ' , ; @' , =' A 0' :4 ' A< 0B' , ;' , ; ;' >R' =B' 1 >=B2, :' , ;' ;AB' <<;' < ' ;AB' F, 00B0:' AB' D, EB' ;AB' < =B ' ;<' , =E, ?B' ;<' ;AB' F2, 06' AB' AB, =' M>, ;B 0' <22<UB=' ;AB' A DA <, =:' U ;A' ;AB' ; , ' , =' ;A BB' = E 0 < 0G ;AB' B0;:' ;<' , E< =' B ?> Y HB D' ;AB' # (%%' , ?AB=' H@' F, , 22B' 0 =B <, =0:' H>;' UB B' BEB ' < B' ;A, ' ;B ' 2BO' < ' ;AB ' < , =B ?A B G , ;' , @' , ;B' B R, D, ' , E< =B=' ;AB' 0 ' < ' = 0FB 0 < 6' 0' , @' U, 0' ;AB' HB0;' UA ?A' A, =' HBB ' 0BB ' > =B ' ;AB' F, 0A' H, B 0' 0 ?B' >=B2, 6' AB' B ' A, =' , 22' HBB ' > 0AB=' U ;A' BU' ?2<;ABO' , =' BM> F B ;' 0 ?B' >D>0;:' , 2@' < ' # D2 0A' 0;< BO' 2, =B=' , ;' , = R6' AB B' UB B' 0 W;@' D> 0:' , =' 0>?A' ,' H<=@' < ' ?, E, 2 @' , 0' A, =' BEB ' @B;' HBB ' ?<22B?;B=' => D' ;AB

T <>2;' ;<' 2, B:' < ' 1, = =:') <E6' P6' AB' =B0B ;B 0' UB B' ,' H<=@' < ' ;UB ;@ < B' B ' < ' ;AB' & , 22<< ' (>, =0:' UA<' A, =' B 2 0;B=' < ' * >F< ;8O' F 0< B 0' ' < =B ' ;<' DB;' ,' ?A, ?B' < ' B0?, F D' G ;2 B@' B, ?AB=' <FB0, ' < ' ?;6' 6

' ,' F<0 ; < ' ;<' , ;; , ? ' ;' ' B, ' , =' 2, :' ';AB B' U,0' ,' 0> Y ? B ;' < ?B' D, ;AB B=' ' ;0' < ;' ;<' N>0; @' A ' ' ??<0 DT6

$ >;' < ' B,?A D' %,' (>, = ,:' B R,D,' 0BB B=' 0>==B 2@' ;<' B,2 RB' ;AB' =, DB E6' < ' A 0' <EB B ;6') <' =<>H;' ;' U,0' ;AB' BU0' ;A, ;' . ?;< ' U,0' ,2 <0;' ' A 0' B, ' ;A, ;' F, ,2@0B=' A :' H>;' AB' A,2;B=' < ' ;AB' ;A:' UAB ' ,' H<2=' ,=E, ?B' U<>2=' ?B ; , 2@' A,EB' B ,H2B=' A ' ;<' 0B RB' , N>BR:' H@' BE ?; D' ;AB' 0 ,22' < ?B' > =B ' 1 2A,>=' , =' BH,0; , 6' "< ' ;A BB' ,; ,2' =,@0:' ;AB' 5;A:' ;A:' , =' ;A' < ') <EB HB :' ;AB' F, 0A' , ' H<=@' B , B=' A,2;B=' ' ,' ,00' ,;' ,' (>, = ,:' ,0' ' < ' ;AB' 0FB? ,2' F> F<0B' < ' ,22<U D' ;AB' B B @' ;<' ?< ?B ; ,;B6' ' ;AB' B2BEB ;A' B R,D,' ,;' 2,0;' HBD, ' ;<' <EB' ,D, ' 6 AB' 0B ;' < U, =' ;AB' UA<2B' < ' A 0' ?,E,2 @:' 0>FF< ;B=' H@' 3,@,0' , =' A 0' ., D>, =' = E 0 < :' ;<' F B00' H,? ' ;AB' < ?B' ' A 0' < ;6' AB@' <> =' 1 2A,>=80' EB' BD B ;0' < ' = ,D<< 0' , DB=' ' 2 B' < ' H,;;2B' HB < B' ;AB' 0 ,22' ;<U ' < ' ?, ,:' , =' 0>FF< ;B=' H@' BH,0; , 80' +<2 0A' , ; @6' " B B' ,=E, ?B=:' >0 D' A 0' ; F2B' 60>FB < ;@' < ' > HB 0' ;<' ;> ' H<;A' 2, 0' < ' ;AB' " B ?A' ?,E,2 @7' 1 2A,>=:' , ;B ' 0< B' F, ; ,2' ?A, DB0:' B; B=' HBA =' ;AB' +<2B0:' UA<' < B=' ,' 2 B' < ' 0 W' H,;;,2 < ' 0M>, B06' ' AB' F, 0A' A< 0B' ,=B' ,' A,2 AB, ;B=' ,;;B F;' ;<' ,;;,? ' ;AB :' H>;' UB B' BFB22B=' H@' ;AB ' <22 D' B' HB < B' ;AB@' ?, B' ;<' ??<0B' M>, ;B 0:' , =' = BU' H,? 6' ;' U,0' <U' <> ' <8??<? ' ' ;AB' , ;B << :' , =' ;AB' F, 0A' , ; @' U,0' < 2@' N>0;' HBD D' ;<' ?< B' >F6' 3,@,0' , =' " B B' ,D BB=' ;A, ;' ;' U,0' ;<<' 2, ;B' ;<' HBD ' ,' 0B?< =' , ;;,? :' , =' F>;' < ' DA; D' ; 22' ;AB' BW;' < D6' $ >;' => D' ;AB' DA;' ;AB' " B ?A' BE,?>, ;B=' ?, ,' , =' B; B=' ;<' , N>BR:' U 0B2@' N>=D D' ;A, ;' ;' U<>2=' HB' 0, B' ;<' U, ;' < ' ;AB' , E,2' < ' ;AB' F, 0A' , ' H<=@6' AB@' A,=' 2<0;' ,H<>;' ;@' B :' " B B80' ?,E,2 @' N>0;' <EB ' ;U<' A> = B=6

) BW;' =,@' X) <EB HB ' S:' TB R,D,' H <>DA;' >F' ;AB' UA<2B' < ' A 0' , @' ;<' ?, ,:' , =' A 0' ?,E,2 @' B?< < ; B=' >F' ;<' ;AB' D, ;B0' < ' , N>BR' , =' ;AB' H =DB' < ' +>B ;B' %,' B@ ,6' BH,0; , ' ,=B' B,=@' ;<' =B B =' ;AB :' , =' A,E D' HBB ' N< B=' H@' ;AB' (B , ' = E 0 < ' < ' <2B=<:' U <;B' ;<' <>2;' ;<' 0,@' ;A, ;' AB' U<>2=' B0 0;' ;<' ;AB' 2,0;' BW; B ;@:' ' < =B ' ;<' D, ' ; B' < ' ;AB' , E,2' < ' . ?;< 80' ?< F0' , =' ;AB' <;AB ' ; <<F0' UA ?A' UB B

UB B' =,@0' < ' 0;< :' ;AB' EB ' <0B' A DA:' , =' ;AB' , ; 22B @' , =' ; , ' 0;>? ' ,0;' < ' ;AB' E 2B' ? <00 <,=0' < ' ?, ,' <EB ' UA ?A' ;AB@' UB B' HB D' H <>DA;6' ' ?< 0BM>B ?B' 2B00' ;A, ' A,2 ' ;AB' F, 0A' , @' U,0' < ;A' < ' ;AB' ,D>0' < ') <EB HB ' :' ;A<>DA' ;AB' ,=E, ?B' ?,E,2 @' F>0AB=' < ' ;<' ;AB' 2 B' < ' ;AB' ,N> ,:' , =' 0 0AB=' U ;A' +, 08Ø # ((%: (' ,H<>;' D, =,6' ;' 0BB B=' BEB ;AB2B00' ;A,;' B R,D,' U,0' ?< ;;B=' ;<' , ' ,=E, ?B' >F< ' 1 ,= =' H@' ;AB' A DA <,=' < ' 2H,?B;B:' UAB B < B' <>2;' H2BU' >F' ;AB' H =DB0' < ' , N>BR' , =' +>B ;B' 2,' BE ,:' , =' < =B B=' . ?;< ' ;<' , ?A' < ' , N>BR' < ' D, =,' U ;A' ;AB' 0;' < F0:' B, 2@' : ' B :' F> F<0 D' ;<' N< ' A ' U ;A' ;AB' 9 D8Ø B0B EB0' , =' ;<' < B ' H,;;2B' < ' ;AB' ,N> ,:' UA 2B' 1 < ; B ' , =' BH,0; , 8Ø +<2B0' , =' (B , 0' 0A<>2=' ,22' >F< ' ;AB' B B @8Ø 2, 6' $>;' ;A 0' F2, ' U,0' < 2B=' H@' ,' BU' <EB' >F< ' B R,D,8Ø F, ;7' AB' <U' ?< B ?B=' ,' B; B,;' ,0' <HNB?;2B600' ,0' A 0' 2,;B' ,=E, ?B6' C>0;' ,0' . ?;< 8Ø ?,E,2 @' ?, B' ' ;<>?A' U ;A' A 0' < ;:' AB' U ;A= BU' A 0' E A<2B' , @' ,? <600' ;AB' ,D>0:' =B0; <@B=' A 0' H =DB0:' , =' B; B=' ;<' %,' 3, R,' < ' ;AB' 0BEB ;BB ;A:' BE =B ;2@' U ;A' ;AB' ;B ; < ' < ' B?<EB D' A 0' <2=' 2 B' < ' ?< > ?,; < ' U ;A' =,2>0 ,:' E ,' ?, 2,' , =' 1 ,= =BN<06

AB' < B ;' ;A,;' ;A 0' BU' =BF, ;> B' HB?, B' BE =B ;:' <>2;' BEB 0B=' ;AB' , ?A D' < =B 0' < ' ,22' A 0' ?<2> 0' 0,EB' . ?;< 80:' , =' :H,=B' ;AB ' B;> ' A,0; 2@' ;<' , N>BR:' UAB B' ;AB' H =DB' U,0' BY F, B=' ' A,0;B:' , =' ;<' ? <00' ;AB' ,D>0' ;AB B:' U ;A' ;AB' ;B ; < ' < ' ;B ?BF; D' B R,D,8Ø 2 B' < ' B; B,;' , =' < ? D' ,' H,;;2B' < ' A ' B,' ?, ,6' . ?;< :' A<UBEB :' A,=' D<;' 0<' , ' ;<' ;AB' B,0;' ;A,;' ;' U<>2=' A,EB' U,0;B=' ; B' ;<' H D' A ' H,? ' ;<' , N>BR:' EAB B < B' AB' U,0' = B?;B=' ;<' ? <00' ;AB' EB ' ,;' . 22, , M>B' , =' <22<U' A, =' ' B R,D,8Ø B, 6

' ;AB' < D' < ' ;AB' B DA;BB ;A' 1 2A,>=8Ø , =' +, 08Ø ?,E,2 @:' = D' ,;' ;AB' AB,=' < ' ;AB' " B ?A' , @:' ? <00B=' ;AB' ,D>0' ,;' , N>BR:' , =' F B00 D' < U, =' B;:' HB;UBB ' ; D<2,' , =' ?, ,:' " B B8Ø A< 0B B ' <E D' ,;' ;AB' AB,=' < ' B R,D,8Ø ?<2> :' UA ?A' < ' ;A 0' =,@' U,0' 0; > D' <>;' HB;UBB ' 6,' 3, R,' , =') <H2BN,0:' , ?A D' A,0; 2@' UB0;U, =' ;<U, =0' ;AB' A DAY <,=6' AB' ?<22 0 < ' < ' 1 2A,>=' , =' " B B' H <>DA;' ,H<>;' ;AB' 2, DB0;' ?,E,2 @' DA;' UA ?A' ;<< ' F2,?B' => D' ;AB' UA<2B' +B 0>2, ' &, 6' "< ' 1 2A,>=' , =' +, 0' A,=' B DA;' BD B ;0:' B, 2@' : ' B :' UA 2B' ;A BB' < ' " B B8Ø <> ' = E 0 < 0' UB B

5 ' #' ' ' 1)' 1 + (W)' "' 5' X)<E6' 5
F B0B ;:' ;<' ;AB' > HB ' < ' <EB ' O: ' 0,H B06' ' B ;AB ' 0 =B'
U,0', @' , ; @' 'A, =6

BH,0; , :' UA<' A,=' ?< B' >F' U ;A' ;AB' 2 DA;' ?,E,2 @' < ' A 0'
?< F0:' U,0' B,DB ' < ' ,' DA;:' , =' B D,DB=' ,;' < ?B6' A, D D'
;AB' F, 60A' < ;' 2 B' U ;A' +, 08O' 2 DA;' A< 0B:' AB' H < B' ;' U ;A'
B,0B6' H>;' " B B' ?, B' < ' U ;A' A 0' B0B EB0:' < D' ;AB' D B,;B '
F, ;' < ';AB ' ;<' ,' 0<2 =' ?<2> V, ' <==' < ,; < ' < ' ?,E,2 @6'
;<';A 0' ,00' 1 2A,>=' ?A, DB=' U ;A' <> ' BD B ;0' < '= ,D<< 06'
AB' AB,E B00' < ';AB ' < ,; < ' = =' <;' 0> ?B' ;<' B ,H2B' ;AB'
F, , =0' ;<' 0;, =6' AB@' H < B' UAB ' ,;;,? B=:', =' UB ;' ;<'
;AB' B, ' ' = 0< =B :' 2B,E D' HBA =' ;AB ' B DA;@' F 0< B 0', ='
0< B' A> = B=0' < ' 22B=' , =' U<> =B=6' AB' " B ?A' 2<0;' < 2@'
,' BU' 0?< B0:' H>;' , < D' ;AB ' U,0' +, 0:' ;AB' <;' > U< ;A@'
0>??B00< ' < ' ;AB' ,=EB ;> <>0' %,0,22B' ' ?< , =' < ' ;AB' 2 DA;'
?,E,2 @' = E 0 < ' ,;;,?AB=' ;<' ;AB' O;A' < F06

1 <E D' < U, =' ' F> 0> ;' < ' ;AB' <>;B=' 0M>,= < 0:' BH,60; , '
,FF <,?AB=' ?, ,:' H>;' A,2;B=' < ' = 0?<EB D' ;A,;' ;AB B' U,0'
,2 B,=@' F, 0A' , ; @' ' ;AB' ;<U 6' AB' AB,=' < ' B R,D,80'
2< D' ?<2> ' A,=' B,?AB=' ;:' UA 2B' ;AB' ?,E,2 @' ?< H,;' U,0' '
F <D B00' 7 ;AB' B0;' U,0' E 0 H2B' 02<U2@' <E D' >F' H@' ? <00 <,=0'
< ' ;AB' B,0;6' <>2;' U,0' ,;' < ?B' ,FF 60B=' ;A,;' ;AB' B B @80'
, @' U,0' ?2<0B' ' A 0' < ; V 60<' ?2<60B' ;A,;' ;' ?<>2=' <;' DB;' ,U,@'
U ;A<>;' DA; D:' < ' ;0' ; , ' , =' B, D>, =' UB B' 0; 22' , '
HBA =:' , =' U<>2=' HB' ?>;' < ' ' ;AB' , ' H<=@' <EB=' < '
U ;A<>;' , D' ,' 0;, =6

B R,D,:' ;A<>DA' AB' A,=' 0A<U ' 0>?A' ; = ;@' UAB ' ,?B=' H@'
BH,0; , 80' 5: ' B ' ,;' , N>BR:', =' H@' . ?;< 80' : ' < '
;AB' ,N> ,:' <U' < B B=' H,;;2B' ;<' ;AB' >?A' < B' < =,H2B'
< ?B' UA ?A' <>2;' U,0' H D D' >F6' B' U,0' =BB=' ?< FB22B='
;<' DA;:' F, ;2@' HB?,>0B' A 0' B ' UB B' ;<<' UB, @' ;<' <EB' < U, ='
;A,;' DA;:' F, ;2@' HB?,>0B' AB' U 60AB=' ;<' D EB' ; B' < ' A 0' ; , ' ;<'
, EB' , =' DB;' < ' ;<' ;AB' # :((%%

' ;AB' < D' < ' ;AB' B;BB ;A' A 0', @' U,0' = 0?<EB B='
= ,U ' >F' ' ;U<' 2 B0' < ' B,?A' 0 =B' < ' ;AB' ;<U ' < ' ?, ,6' AB B'
UB B' 0; 22' 0< B' OP: ' , ; @', =' : ' ?,E,2 @' > =B ' , 0'
=B0F ;B' < ';AB' 2<00B0' < ';AB' 2,;B' UBB ' AB' < ?< D' " B ?A', @

' <2H< B:' ' ,' 2B;;B ' =,;B=' * B?B HB ' J ' 0,@0' ! UB' A,=' OP: ' , ; @'
, =' B, 2@' P: ' ?,E,2 @' = ,U ' <>;:' ' ,' EB @' H,=' F<0 ; < 68' B' U,0'
F B0B ;' ,22' ;A <>DA' ;AB' ?, F, D :' H>;' U <;B' <' >22' BF< ;6

U,60 0 ,22B 7 ;A<>DA' ;' 0;B B 2 : ' A< 0B' ;' A,=' < 2@' 4: ' <<; V ;AB' (B , 0' , =' +<2B0' < ' ?H,0; , :' 1 < ; B ' U ;A' B, 2@' ;AB' UA<2B' < ' ;AB' ;A' < F0:' ,' H D,=B' < ' * ?00<22B08' = E 0 < :' ;AB' 9 D80' D>, =0:' , = ;AB' ?,E,2 @' < ' 1 2A,>=:' +, 0:' , =' $B,> BY D, =' . ?;< ' U,0' ;<<' , ' < ; ;<' HB' ,E, 2,H2B7' A,E D' <> =' ;AB' 2<< 2B=' ,D>0' A, =' ;<' ? <00:' AB' U,0' < ' ;A 0' =,@' H, B2@' ' ;<>?A' U ;A' ;AB' BW; B B' B, D>, =' < ' B R,D,80' , @' UA ?A' U,0' B0?< ; D' ;AB' ; , 6' $B D' B, 2@' ;UB ;@' 2B0' < ' ?, 2,:' AB' ?<>2=' <;' A<FB' ;<' , EB' ' ; B' < ' ;AB' DB B ,2' ,?; < :' ' ;' U,0' ;<' HB' =B2 EB B=' BW;' < 6' ' ? R,D,' 0;<<=' ' < ' , <;AB ' =,@:' . ?;< ' U<>2=' HB' F B00 D' A ' < ' ;AB' 2, ' , =' B, ' UA 2B' ;AB' , ' , @' U,0' ' A 0' < ;G H>;' ;' U,0' A DA2@' F <H,H2B' ;A ,;' B R,D,' U<>2=' <;' 0;, =:' H>;' U<>2=' B; B,;' ,;' DA;7 ,22' A 0' F BE <>0' ?< =>?;' , D>B=' ,' D B,;' = 0 ?2 ,; < ' ;<' 0 ' ,' H,;;2B6' & AB B < B' <>2;' , =' ;AB' 9 D:' , ;B ' ,' 0A< ;' = 0?>00 < T:' ,D BB=' ;<' ,;;,? ' ,;' < ?B:' =B0F ;B' ;AB ' D B,;' > B ?,2' Y B < ;@6' ' ;AB' <FB ' F2, ' < ' %,' . , ?A,' ,' = ;B B ?B' < P: ' < ' 4: ' , ; @' U,0' <;' B <>DA' ;<' <>;UB DA' ;AB' 0>FB < ' M>,2 ;@' , =' ; , D' < ' ;AB' " B ?A' , @6

AB B' 0:' 0<' ;<' 0FB, :' <' F<0 ; < ' UA,;BEB ' ,;' ?, ,G ;AB' 2 ;;2B' > U,22B=' ;<U ' 2 B0' ' ,' 2BEB2' >F2, =:' UAB B' ;AB' < 2@

T . R6' 1 < ; B 80' , ; @' * E 0 < 0' I (, =' , =' (,R, J:
;UB ;@ ;U<' 2 ,;;06' X< B' BD B ;' =B=>?;B=S' ,H<>;' : ' B '
BH,0; , 80' +<2 0A' * E 0 < ' , =' (B , ' * E 0 < '
I> =B ' .B 27' , =' %BE,2J6 6 6 6 :
9B@80' $ D,=B' < ' * B00<22B08' * E 0 < ' < ' ;2 B
B ; ,2' B 0 B E B 6666666666666666666666666666666666666666 6
2 7' 9 D80' B0B EB0:' E R6' <> ' D>, =' H,;;,2 < 0
, =' ;A BB' < ; A B 0 6666666666666666666666666666666666666666 6 '
1 2A,>=80' * ,D<< 0:' EB' BD B ;0' :
+, 0800' % DA;' ,E,2 @:' ,;;,?AB=' ;<' O;A' < F0:
;A BB' B D B ; 0 6666666666666666666666666666666666666666 :
$B,> BD, =80' ,E,2 @' < ' ;AB' ;A' < F0:' <>
B D B ; 0 6666666666666666666666666666666666666666 6
AB' 9 D80' ,E,2 @:' < B' BD B ;' < ' ;AB'
' (>, =0:' < B' < ' A,00B> 0' ; 4
; 22B @:' ,FFB 0:' e ?6666666666666666666666666666666666666666 ;; 6

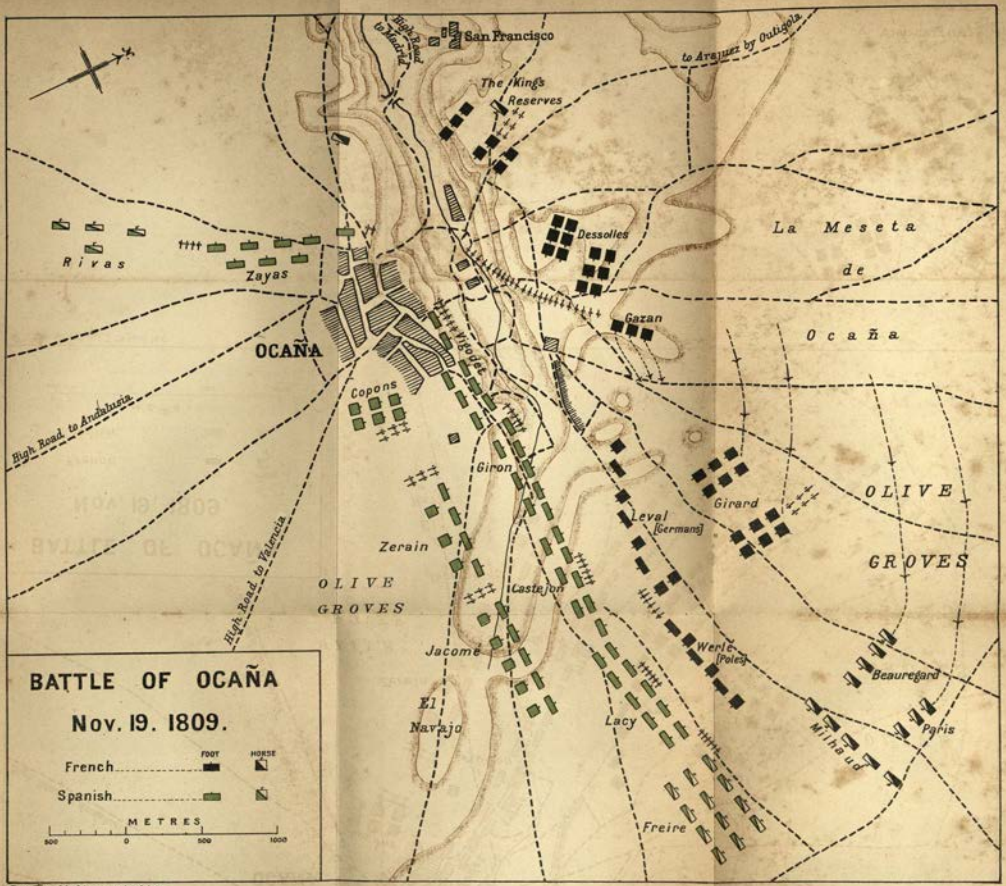
<;,2' ,H<>;' : ' B

!' C<0BFA' =B?2, B=' ;A,;' AB' > DB=' 0;, ;' ,;;,? ' UAB ' <>2;' ,=E 0B=' U, ; D' < ' . ?;< 6' BB' A 0' 2B;;B ' ' E<26' E ' < ' * >?,00B80' < %' '.'
%() .% %' ' ? (%)# K) 3%

HB@< = ; " B B: U ;A ;AB UA<2B < ;AB ?,E,2 @ BW?BF;; ;AB H D,=B < ;AB BW; B B 2B ;; > =B E,06 ' < ;> ,;B2@ ;AB F, 0A A< 0B: >?A 0A, B H@ ;AB ?< H,;; < ;AB F B?B= D =,@: U,0 ,UB, F <;B?; < < ;AB 2, : =B0F ;B ;0 < =,H2B > HB 06 AB 0 W;@ D> 0 < ;AB , ; 22B @ UB B = ,U <>;; ;AB ;B E,20 < ;AB , ; @ = E 0 < 0 < ;AB 0;; , = 0B?< = 2 B6

<>2;80 F2, < , ;;,? U,0 0<< < B=6 AB ,E B ,=B ;AB F, 0A 2B ; V HB@< = ?, ,V ,??B00 H2B: H>;,20<F BEB ;B;2 ;; < ;, D , @ < ;B 0 EB ,?; < 6 AB 1, 0A,2 ;AB B < B B0<2EB= ;< D < B ;; ?< F2B;B2@: , = ;< ?< ?B ; ,;B ,22 A 0 B < ;0 ,D, 0;; ;AB A<0; 2B ?B ; B , = DA;: ;AB <FB D <> =6 AB 0?AB B ,=<F;B= U,0 ,0 F2B < B6 BH,0; , 80 +<2 0A , = (B , = E 0 < 0 UB B ;< ,;;,? ;AB F, 0A DA;U D: , = UAB ;AB@ EB8?, ;?2<0B M>, ;B;80 U ;A ;AB B B @ ;AB , ,00 < ;AB " B ?A ?,E,2 @ U,0 ;< ,22 >F< " B B80 A< 0B: = EB ;; <>;< ;AB B2=: , = ,;;,? < ;AB 2, ;AB = E 0 < 0 ,2 B,=@ B D,DB= U ;A ;AB , ; @6 "< ;A 0 F 8F<0B 1 2A,>=80: +, 080: , = $B,> BD, =80 BD B ;0: < B ;A, : 0,H B0: UB B ,00B= HBA = ;AB +<2B0 , = (B , 06 "< ,; B ;AB , ?A U<>2= HB ,0 B= H@ <2 EB D <EB0 , = > =>2,; < 0 < ;AB D <> =: 0< ;A,;; ;AB@ DA;; ?< B M> ;B 0>==B 2@ >F< ;AB B B @6 1 < ; B U ;A A 0 0;; = E 0 < V ;A,;; < (, = V , = ,; BD B ;; < (,R, 80: <22<UB= ;AB B, < ;AB +<2 0A , = (B , , ; @:; <0>FF< ;; ;AB < ;,2 ,;;,? 6 *B00< ' B0: U ;A A 0 <U H D,=B , = (,R, 80 B , D < B: ;<< F<0;; <FF<0 ;B ?, ,: B,=@ ;< ,22 >F< ;AB F, 0A ?B ; B: UAB ;AB ,;;,? ;< A 0 2B ;; 0A<>2= A,EB HBD> ;< , B U,@6 B A,= A 0 < ;; ;AB ,00B= , ; 22B @ < ;AB OT;A , = ;A < F0: ;A ;@ D> 0 > =B B , < ;; UA ?A ;<< D <> = < ;,2<U < ' ,H<EB ;AB D B,;; ,E B: < UA ?A ;AB@ ?<>2= H<;A F2,@ >F< ;AB ;<U < ? , ; , = ,20< B 2,=B F, ;; < ;AB F, 0A 2 B ;< ;0 B= , ;B DA;V . D<=B;80 = E 0 < , = A,2 < (< 806 " ,22@ ;AB 9 D: U ;A A 0 D>, =0 , = <;AB ; <<F0: A< 0B , = <<;: UB B F2,?B= ;< ;AB DA;; B, < * B00< ' B0: ;< ,?;; ,0 , DB B ,2 B0B EB: < ;< <EB ,D, 0;; 3,@,0 AB 0A<>2= ,;;B F;; ;< ? <00 ;AB ,E B , = ;> ;AB " B ?A DA;6

AB F2, : =B0F ;B < 0< B ?AB? 0 ,; ;AB ?< B ?B B ;: U< B= ,0,;0,;0,?;< @ ,0A < 6 AB (B , , = +<2 0A



B.V. Cambridgeshire, Oxford, 1907

*B00<22B0' U ;A' A 0' ;U<' H D,=B0:' <22<UB=' H@' ;AB' 9 D8Ø B0B EB:' ? <00B=' ;AB' ,E B' ,=' ,;;,? B=' ;AB' ;<U ' <' ?, ,:' ,=' ;AB' ;U<' = E 0 < 0V . D<=B;' ,=' <F< 0V UA ?A' 2,@' ' 0;' ,=' 0B?< =' 2 B' B= ,;B2@' ;<' ;AB' B,0;' <' ;6' AB0B' B; B=:' ,=' D<;' ,U,@' HB;;B' <=B' ;A, ' ;AB ' ?< ,=B0' ;<' ;AB' DA;6' ' ,22' ;AB' F, 0A' , @' < 2@' 3,@,08Ø E, D>, =' = E 0 < :' <' ;AB' BW; B B' 2B ;:' <U' B , B=' ;,?;6' B R,D,' A,=' 0B ;' ;' , ' <=B' ;<' ? <00' ;AB' ,E B' , =' ,;;,? ' ;AB' " B ?A' DA;:' UAB ' AB' 0,U' A 0' , @' HBD D' ;<' H B, ' >F6' AB :' ,' B-' >;B0' 2,;B :' AB' 0B ;' , <;AB' <=B' H == D' ;' ??<0B' ;<' ;AB' DA;' , =' ?<EB' ;AB' B; B,;6' ;B' ;A 0' ;AB' < , =B A B' =B0?B =B=' < ' A 0' ;<UB :' <> ;B=' 0' 2 < 0B:' , =' 2B=6' 3,@,0' ?, B=' <>;' ;AB' 0B?< =' < =B :' <EB;7' ;<' ;AB' DA;:' , =' <> =' A 0B2' B ?< Y F,00B=' H@' ,00B0' < ' >D ; EB0' < ' (< 80:' ,0;BN< 80:' , =' %,?@8Ø H < B ' = E 0 < 0:' WB=' U ;A' " B ?A' ?,E,2 @6' B' 0>0;, B=:' U ;A' D B,;' ? B= ;' ;<' A 0B2' , =' A 0' ; <<F0:' ,' B, D>, =' ,?; < ' < ' 0< B' 2B0:' ; 22' B, ' ;AB' E 22,DB' < ' * <0' $, <0:' UAB B' A 0' 2 B' U,0' H < B ' , =' A 0' B ' ,;' 2,0;' WB=' U ;A' ;AB' B0;' < ' ;AB' >D ; EB0

AB' UA<2B' <>;B=' >2; ;>=B' <U' 0; B, B=' U 2=2@' <EB ' ;AB' F2, :' U ;A' ;AB' " B ?A' ?,E,2 @' ' A<;' F> 0> ;6' A<>0, =0' < ' F 0< B 0' UB B' ;, B :', =' ;AB' ?A,0B' < 2@' B =B=' U ;A' DA; ,226' AB' >D ; EB0' AB,=B=' 0; , DA;' < ' ;AB' B ,' 1< B ,:', =' B,?AB=' ;' U ;A' ,' ,F = ;@' BEB ' D 8B,;B ' ;A, ' ;A,;' U2 ?A' ;AB@' 2 =' >0B=' ' ;AB ' <>;U, =' , ?A' ,' < ; DA;' HB < B6' . ?;< 80' ?,E,2 @' , EB=' ' ; B' ;<' ;, B' >F' ;AB' F> 80> ;' BW;' < DG' ;AB@' A,=' < ' ;AB ' U,@' ;<' ;AB' B2=' ?,F;> B=' ;AB' UA<2B' < ' ;AB' ; , 0' < 6 ;AB' F, 0A' , @:' < ' ;AB' <,=' < ') <H2BN,0' ;<' ?, ,6' AB' 2<00B0' < ' B R,D,8Ø, @' UB B' ,FF,22 D7' ,H<>;' O: ' 22B=' , =' U<> =B=' , =' O: ' F 0< B 06' A ;@' 2,D0' , =' ;@' <>;' < ' ;AB' 0 W;@' D> 0' A,=' HBB ' ?,F;> B=6' & AB ' ;AB' U B? 0' < ' ;AB' , @' A,=' HBB ' ,22 B=' ' ;AB' F,00B0:' ;A BB' UBB 0' , ;B ' ;AB' H,;;2B:' < 2@' 0< B' : ' , ; @8' , =' : ' A< 0B' UB B' BF< ;B=' ,80

8' * B' < 2@' =B;, 2B=' ,??<> ;0' < ' ;AB' F, 0A' <EB B ;0' ;A,;' ' A,EB' = 0?<EB B=' , B' ;AB' = E 0 < ,7' BF< ;0' < ' %,?@' , =' 3,@,0:' H<;A' ' ;AB' "< B D ' ?B' , ?A EB0' ,;' ;AB' B?< =' ?B6' B R,D,80' = 0F,;?A' 0' 0< E,D>B' ,0' ;<' HB' B, 2@' >0B2B006

^. R6' 3,@,0:' . D<=B;:' , =' ,0;BN< :' ,H<>;' O: ' B ' B,?A:' <F< 0' : :' (< ' : :' B , 0' < ' ;AB' <;AB ' ;A BB' = E 0 < 0' ,H<>;' :P 6' " < ' ;AB' B;> 0' ' ;AB' 1,= =' & , ' ?B6

5P‘ #‘ ' 'W1)‘ 1 + ( )‘ "‘ 5‘ X) <

F B0B ;6‘ AB‘ = E 0 < 0‘ < ‘ %, ?@:‘ C, ?< B:‘ , =‘ 3B , ‘ A, =‘ F , ?; ?, 22@‘ = 0, FFB, B=:‘ , =‘ ;AB‘ <;AB 80‘ A, =‘ 2<0;‘ < ‘ ,‘ ;A =‘ ;<‘ ,‘ A, 2 ‘ < ‘ ;AB ‘ > HB 06‘ AB‘ ?< = ; < ‘ < ‘ ;AB‘ ?, E, 2 @‘ U, 0‘ FB?>2 , 2@‘ = 60D , ?B >27‘ , 0‘ ;‘ A, =‘ BEB ‘ 0;<<=‘ ;<‘ DA;:‘ ;0‘ 2<00B0‘ BF B0B ;‘ <;‘ F 0< B 0:‘ < ‘ ;AB‘ <0;‘ F, ;:‘ H>;‘ B B‘ > , U, @0‘ UA<‘ BEB ‘ B;> B=‘ ;<‘ ;AB ‘ 0;, =, =06‘ AB‘ " B ?A‘ A, =‘ 2<0;‘ , H<>;‘ 5 ‘ < ?B 0‘ , =‘ :5 ‘ B :‘ B, 2@‘ , 22‘ ‘ ;AB‘ = E 0 < 0‘ < ‘ %BE, 2:‘ & B 2B:‘ , =‘ (, = 6‘ AB‘ ?, E, 2 @:‘ UA ?A‘ A, =‘ =B2 EB B=‘ ;AB‘ D B, ;‘ 0; < B‘ , =‘ U< ‘ ;AB‘ H, ;;2B:‘ 0> B B=‘ EB @‘ 2 ;;2B6‘ 1 < ; B ‘ A, =‘ HBB ‘ 02 DA;2@‘ U<> =B=:‘ %BE, 2‘ , =‘ (, =‘ 0BEB B2@6

#EB ‘ , 22<U D‘ < ‘ ;AB‘ , ?;‘ ;A, ;‘ B R, D, ‘ A, =‘ HBB ‘ ;AB‘ E ?; ‘ < ‘ ;AB‘ C> ;, 80‘ 0B 0, ;B‘ B0<2EB‘ ;<‘ , B‘ , ‘ < B 0 EB‘ <EB B ;‘ < ‘ 1 , = =:‘ ;‘ 0‘ F<00 H2B‘ ;<‘ 0FB, ‘ U ;A‘ F, ; B ?B‘ < ‘ A 0‘ DB B , 2Y 0A F6‘ "< ‘ ,‘ ?< H , ; < ‘ < ‘ , 0A B00‘ , =‘ E, ? 22, ; < ‘ ;‘ BW?B20‘ ;A, ;‘ < ‘ , @‘ <;AB ‘ F, 0A‘ DB B , 2‘ => D‘ ;AB‘ UA<2B‘ U, 6‘ 0‘ < 2@‘ ?A, ?B‘ U, 0‘ ;<‘ ?, ;?A‘ ;AB‘ B B @‘ HB < B‘ ;AB@‘ ?<>2=‘ ?< Y ?B ; , ;B‘ 7 AB‘ 0>??BB=B=‘ ‘ =< D‘ ;A 0‘ H@‘ A 0‘ , F =‘ , ?A‘ < ‘ ;AB‘ F, 00B0‘ ;<‘ %, ‘ (>, = , 6‘ AB ‘ AB‘ U, ;B=‘ ;A BB‘ =, @0‘ ‘ =BF2< , H2B‘ =B? 0 < :‘ ;A<>DA‘ ;AB B‘ UB B‘ < 2@‘ : ‘ B ‘ HB;UBB ‘ A ‘ , =‘ 1 , = =6‘) BW;‘ AB‘ B0> B=‘ A 0‘ , =E, ?B:‘ H>;‘ H@‘ ;AB‘ ? ?> ;<>0‘ <>;B‘ < ‘ . 22, , M>B:‘ H@‘ ; , D‘ UA ?A‘ AB‘ 2<0;‘ ;A BB‘ =, @0‘ < B6‘ AB ‘ AB‘ A, 2;B=‘ , D, :‘ ;AB‘ < B ;‘ ;A, ;‘ AB‘ <> =‘ . ?;< ‘ U ;A‘ : ‘ B ‘ ‘ A 0‘ < ;:‘ ;A<>DA‘ AB‘ DA;‘ 0; 22‘ A, EB‘ <>DA;‘ , ;‘ D B, ;‘ , =E, ; , DB6‘ % , 0; 2@‘ AB‘ B; B, ;B=:‘ @B;‘ 0< 02<U2@‘ , =‘ > 0 2 >22@‘ ;A, ;‘ AB‘ U, 0‘ , 22@‘ H <>DA;‘ ;<‘ , ?; < ‘ , ;‘ ?, , ‘ H@‘ ;AB‘ O: ‘ B ‘ < ‘ 1 < ; B ‘ , =‘ BH, 0; , 6‘ B‘ U, 0‘ 0B ;‘ <>;‘ ;<‘ U ‘ , ‘ H, ;;2B:‘ 0 ?B‘ 1 , = =‘ ?<>2=‘ <;‘ HB‘ =B2 EB B=‘ U ;A<>;‘ < B:‘ , =‘ BU‘ ;A, ;‘ AB‘ >0;‘ DA;‘ 0<< B ‘ < ‘ 2, ;B :‘ H>;‘ ;A BU‘ , U, @‘ A 0‘ , E<> , H2B‘ <FF< ;> ; B0:‘ , =‘ ;AB ‘ , ??BF;B=‘ , ‘ , ?; < ‘ UAB ‘ , 22‘ ;AB‘ ?A, ?B0‘ UB B‘ , D, 0;‘ A 6‘ "< ‘ AB‘ >0;‘ A, EB‘ <U ‘ H@‘ ;A 0‘ ; B‘ ;AB‘ 0B , H2B‘ M>, 2 ;@‘ < ‘ A 0‘ ?, E, 2 @:‘ @B;‘ D, EB‘ H, ;;2B‘ ‘ , ‘ E, 0;‘ F2, :‘ UAB B‘ BEB @;A D‘ =BFB =B=‘ < ‘ ;AB‘ <> ;B=‘ , 6‘ ‘ ;AB‘ , ?;>, 2‘ < B ;‘ < ‘ ?< 2 ?;‘ AB‘ 0BB 0‘ ;<‘ A, EB‘ B , B=‘ ‘ , ‘ A@F <; RB=‘ ?< = ; < ‘ < ‘ H 0‘ ?A> ?A ;<UB :‘ 00> D‘ A, =2@‘ , ‘ < =B :‘ , =‘ , 22<U D‘ ;AB‘ DA;‘ ;<‘ D<‘ , 0‘ ;‘ F2B, 0B=6‘ ! B;‘ AB‘ U, 0:‘ H@‘ , 22‘ , ??<> ;0:‘ F<00B00B=

‘ 1 , ; B 80‘ 2 0;0‘ < ‘ < ?B 0‘ 22B=‘ , =‘ U<> =B=‘ 0A<U‘ ;A, ;‘ ;AB‘ (B , ‘ = E 0 < ‘ 2<0;‘ 5‘ < ?B 0:‘ ;AB‘ +<2 0A‘ = E 0 < ‘ :‘ (, =80‘ = E 0 < ‘ ‘ V‘ ‘ , 22‘ 4 ‘ <>;‘ < ‘ ;AB‘ ;<; , 2‘ < ‘ 50‘ < ?B 0‘ A ;‘ ‘ ;AB‘ UA<2B‘ , @6

< 'FB 0< ,2 ?<> ,DB:' ,0 AB' 2 ,=' F <EB=' ,;' 2?, R' , =' B20BUAB B6' FF, B ;2@' B0F< 0 H 2 ;@' B=>?B=' A ' ;<' ,' ?< = ; < ' < 'E,? 2Y 2,; D' = <?@6' +B A,F0' ;AB' <0;' 0> F 0 D' ,?;' < ';AB' UA<2B' H>0 B00' 0' ;A,;' ;AB' C> ;,' B;, B=' A ' ' ?< , =' , ;B ' A 0' ,0?<:' ;A, B=' A ' < ' A 0' 0B E ?B0:' , =' 0B ;' A ' , ' A< < , @' F B0B ;V ,0' ;' A,=' =< B' ;<' >B0;,' , ;B ' 1 B=B22 ' U ;A' 0< BY UA,;' HB;;B ' BW?>0B6' #%?' U,0' ;0' <U ' , :' , =' ;' = =' <;' ;A <U' A ' <EB :' BEB ' UAB ' AB' A,=' F <EB=' A 0' FB B?;' ?< Y FB;B ?B6

<' ?< F2B;B' ;AB' , ,; EB' < ';AB' =BF2< ,H2B' ,>;> '?, F, D ' < ' 5:' ;' < 2@' B , 0' ;<' ;B22' < ';AB' =< D0' < ' 2H>M>B ;N>B' , =' * B2' +, M>B6' AB' < B ' F2,@B=' A 0' F, ;' U ;A' B,0< ,H2B' 0>??B007' AB' U,0' < =B B=' ;<' = 0; ,?;' ;AB' ,;;B ; < ' < ';AB' B B @' < ';AB', @' < '%,' 1, ?A,:' , =' = =' UA,;' AB' ?<>2=6' ,E D' D<;' 0< B' : ' B ' ?< ?B ; ,;B=' ,;' 2 , ,R:' AB' 0B ;' < B' ?<2> ' <EB ' ;AB' ,D>0' ;<' =B < 0; ,;B' ,D, 0;' ;AB' =' < F0' < 'HB@< =' ;AB' EB :' , =' U ;A' , <;AB ' ;A B,;B B=' ;AB' H =DB' < ' ,2,EB ,' < ';AB' B, '0 =B6' $>;' B>=B2B;:' <U' '?< , =' < ';AB' =' < F0:' 0<< ' <> =' ;A,;' ;AB B' U,0' <' B,2 ;@' ' A 0' =B < 0; ,;< :' , =' ;A,;' AB' U,0' <;' 0>FF< ;B=' H@' ;AB' # D2 0A:' ;A<>DA' AB' A,=' D EB ' <>;' ;A,;' & B22 D;= ' U,0' ?2<0B' ' A 0' B, 6' ;B '0 0A D', <> =' ,2,EB ,' < ';AB' 4;A' ;<' ;AB' =' < ') <EB HB :' ;AB' * > B' A,0; 2@' B? <00B=' ;AB' EB '< 'AB, D' ;AB' BU0' < ' ?, ,:' , =' B0> B=' A 0' <2=' F<0 ; < 06

* B2' +, M>B8' ?, F, D ' U,0' < B' E D< <>0' , =' < B' > < Y ;> ,;B6' & A 2B' AB' 2,@' ';AB' F,00B0' ,H<EB' $BN,' , =' $, 2<0:' AB' D<;' 6B, 2@' BU0' < ';AB' U ;A= ,U,2' < ' (<= <;8' , =' 1, ?<D B;8' ; <<F0' ;<U, =' 1 ,= =:' UAB ' <>2;' 0> < B=' ;AB ' < ';<' B < ?B' ;AB' , ', @6' B' B,0< B=' ;A,;' 0 ?B' AB' A,=' <U' < 2@' ;AB' P;A' < F0:' 0A< ' < ' < B' < ';0' H D,=B0:' ' A 0' < ;:' AB' DA;' BFB,;' ;AB' 0>??B00' < ' , , B0:' < ' 1, ?A, =' U,0' UB, B ';A, 'AB' A,=' HBB ' ' ?;<HB :' UA 2B' AB' A 0B2 ' U,0' , ' 0; < DB 6' ??< = D2@' AB' = 0 BD, =B=' , ' < =B ' < ';AB' C> ;,' ;<' BW;B =' A 0' <FB ,; < 0' 0<>;AU, =:' , =' ;<' N< ' 2H>M>B M>B' ' ;AB' E,22B@' < ';AB' ,D>06' 0;B,=:' AB' , ?AB=' < ?B' < B' >F< ' ,2, , ?,' < ') <EB HB ' :' ;AB' =,@' HB < B' ;AB' = 0,0;B ' < ' ?, ,6' B' = <EB' ' , ' <>;2@ D' H D,=B' < ' 1, ?A, =8' < ?B' < ' 2H,' =B' < B0:' , =' F B00B=' ;' E D< <>02@' H,? ' ;<U, =0' ;AB' , ' H<=@6' < 0? <>0' ;A,;' U ;A' A 0' : ' B

& "(

5S * # % + ` ' # 8 # # B D> 0: <0; < ; ;AB H, DD, DB: , =, H<>; : 22B= < ; , B V < EB @ > <>0 =B=>?; < 0 < , , @ < : B 6 AB " TB ?A ?, 0>, 2; BO UB B 2B00 ;A, , 22 * B2 +, M>B U, 0 =B; , B= <; ; < DA; , D, BW; < D: , =H, =B A 0 , @ , B < > =B ?<EB < ;AB DA; 6 AB = 0< =B ; A, ; <22<UB= U, 0 DA; >27 ;AB ;2 B? = E 0 < 0 ;A, ; A, = HBB ; AB H, ; ; 2B = 0FB 0B=: , = UB ; < , 22 = B?; < 0: 0< B ; <U, =0 >=, = <= D<: <; AB 0 ; <U, =0 , , ?0: <; 2 B 0 H@ ; AB A 22 <, = ; A, ; 2B, =0 ; <U, =0 , 2, , = ; AB + , 00 < $, <06 1, @ < ;AB , U %B< B0B ; <<F0: ; A<>DA ; AB@ A, = <; HBB B D, DB; 2: , 20< 2B ; ; 2 B ?<2<> 0 ;AB =, 6 ; U, 0 , >22 < ; A HB < B * B2 +, M>B ?<>2= ?<22B?; A 0 UA<2B , @: UA ?A: UAB ; ; A, = HBB B< D, RB=: U, 0 <> = ; < > HB P: B : =B0F ; B 22 ; 0 0 < ;> B06 ; U<>2= 0BB : ; 2 B B < B: ; A, ; HB0 =B ; AB 2<00B0 ; AB H, ; ; 2B 0< B : B >0; A, EB D< B < 8 ; < ; AB A< B06 AB => B WB= A 0 AB, = M>, ; B 0 , ; , 1, ; =B BHBN<0 ; AB B , =B (, ; , : , = = 0FB 0B= 2 0 , ; @ ?, ; < B ; 0 , H<>; $BN, : #>B ; ?D> , 2=<: , = 1 , =, =B , 0; , 6 , E D < 2@ ; AB > B= BD < , <> = < , , = +2, 0B ? , : , = ; AB 0 , 22 = 0; ?; , H<>; >=, = <= D<: ; < BB= ; AB : ; AB0B ; <<F0 0> B B= = B, = >2 F E, ; < 0 => D ; AB U ; B : 2 E D < A, 2 Y , ; < 0 B B= <>; U ; A B= H2B , ?< 06 $@ ; AB ==2B < C, >, @ ; AB@ A, = 2<0; 5: B < BEB : =@0B ; B @: , = 0; , E, ; < 6 * B0fJ ; B , 22 ; A 0: ; 0 , ; ; < 0, @ ; A, ; * B2 $, M>B8 ?, F, D ?< ; , 0; 0 <0; , E<> , H2@ U ; A ; A, ; < B R, D, 6 B 0A<UB= , 2, >=, H2B F >=B ?B UAB AB ; U ?B BE, ?>, ; B= , 2, , ?, , ; AB ; A, DA; , H, ; ; 2B ; AB F2, 6 0 E ?; < @ < , , BO U, 0 <0; ? B= ; , H2B: 0A<U D ; A, ; UAB F >=B ; 2@ ?< =>?; B=: , = , DB= , UB22 ?A<0B A 22 F<0 ; < : A 0 , @ ?<>2= D EB , D<<= , ??<> ; < ; 0B2 6 $>; < ; AB = 0, 0; B < 2H, =B < BO A 0 B?< = DA; HB ?< 0 =B B= BW?B22B ; 6 AB B: ; 0 ; >B: AB ?< ; ; B= , D , EB 0; , B: H@ 0BF, , ; D A 0 , @ ; < ; U< A, 2EB0 H@ ; AB EB UAB A 0 B B @ U, 0 F> 0> ; 6 $>; A 0

1 , ; B>80 2 0; 0 0A<U 0 < ?B 0 22B= , = 0 U<> =B=6 AB B 0 , 2< D BF< ; H@ * B2 +, M>B ; AB B?< = ?B: UA ?A AB 0; , ; B0 ; A, ; ; AB F, ? U, 0 ?, >0B= H@ , 0; , @ F, ; @ < A 0 <U <>; B= ?, E, 2 @ =, 0A D , < D ; AB B, D>, = ; AB = , : , = ? @ D ; A, ; ; AB " B ?2 UB B F> 0> D ; AB 6 B , ; B E, =0 ?<> ; , , 22B= , = 0A<; 0< B ?, E, 2 @ B < ?<U, = ?B6

% & " ' O)

' % & " J ' & + ' " @ #

% ! $ '

#') # ` ' #) # ' "') 6' * # # 1 $ # ' V'
C) ' !'

' BU0' < ' ;AB' = 0 , 0 ; B ' < ' ?, ,' D , EB' , ' =B , ;A H2<U' ;<' ;2 B'
B ; ,2' C> ; , 6' ;0' , ; ;B F;' ;<' U ' H , ? ' ;0' 2<0;' ? B= ;' H@' , '
< B 0 EB' ?, F , D ' , D , 0;' 1 , = =' A , E D' B =B=' ' 0>?A' , '
2, B ; , H2B' , 0A < :' ;AB B' U , 0' <;A D' 2B ;' < ' ;' H>;' ;<'
, ?M> B0?B' ' ;0' <U ' 0>FB 0B00 < ' H@' ;AB' < ; = 0?>00B=' , ; < ,2'
< ;B06' $>;' ;A , ;' , 00B H2@' U , 0' <;' ;<' BB;' ; 22' 1 , ?A' :' '
V , ' = , ;B' 0; 22' <> ' < ;A0' ' ;AB' >;> B: V , =' BEB ' ;0' < ' , ='
?< 0; ;>; < ' A , =' <;' @B;' HBB ' 0B;;2B=6' " < ' ;' U<>2=' A , EB' HBB '
, H0> =' ;<' A , EB' ? , 22B=' ;' ;<DB;AB ' ' ;AB' , ? B ;' , =' > BF BY
0B ; , ; EB' 0A , FB: V , ' 2BD , ?@' < ' ;AB' ; B' < ' A , 2B0' . : V ' UA ?A'
;' A , =' HBB ' U< ;' ;<' BB;' > =B ' ;AB' $<> H< ' D06' 1 , @'
BD < 0' A , =' BU' < ' <' B HB T07' =B? , @B=' B= , BE , 2' ;<U 0' < '
2=' , 0; 2B' A , =' < B' =BF>; B0' ;A , ' ;AB' <0;' F<F>2<>0' F <Y
E ?B06' 1 < B<EB :' ;' A , =' @B;' ;<' HB' 0B;;2B=' A<U' ;A , ;' 2 , DB ' A , 2 '
< ' ;AB' B , 2 ' UA ?A' U , 0' <U' <??>F B=' H@' ;AB' " B ?A' U , 0' ;<' B2B?;'
;0' BF B0B ; , ; EB06' AB' ?< 00 < ' U , 0' 0; 22' 0 ;; D' ;<' =B;B Y
B' ;AB0B' E ; , 2' F< ;0:' , =' ' ;A 0' < B ;' < ' = 0 , @' ;AB' = , @' < '
;AB' , 00B H2@' < ' ;AB' < ;B0' 0BB B=' EB @' , ' = 0; , ;6' AB' " B ?A'
DA;' HB' <22<U D' A , =' < ' ;AB' ABB20' < ' B R , D , 80' H < B ' A<0;:'
, =' DA;' B ;B ' BE 22B:' 2< D' HB < B' ;' A , =' HBB ' =B? =B=' UA , ;'
0< ;' < ' , ' < ;B0' U , 0' ;<' ; , B' <EB ' ;AB' F<UB ' < ' ;AB' A , =0'
< ' ;AB' = 0? B= ;B=' B ; ,2' C> ; , 6

A , ;' <0;' > A , FF@' D<EB B ;:' ;AB B < B:' A , =' ;<' , ?B' H<;A'
, ' , ?>;B' ?< 0; ;>; < ,2' ? 0 0' , =' , ' , ?>;B' 2 ; , @' ? 0 06' < BY
;A D' A , =' ;<' HB' =< B' U ;A<>;' =B2 , @' ;<' 0 , ; 0 @' F>H2 ?' <F < '
?< ?B D' ;AB' ?< E<?, ; < ' < ' ;AB' < ;B0:' < ' ;AB' BE<2>; < '
UA ?A' A , =' HBB ' ?AB? B=' H@' & B22B02B@80' , =' ' BF;B HB ' U<>2=' '
?B ; , 2@' H> 80;' < ;A' , D , 6' $>;' BEB ' < B' F B00 D' U , 0' ;AB'
B?B00 ;@' < ' , 22@ D' , =' B < ? D' ;AB' , @' UA ?A' A , =' HBB

5 # C ')) * * # # #

1 B, UA 2B ;AB BWB?>; EB ?< ;;BB: U ;A ;AB C> ; , 8 , FF <E , 2: 00>B= , 2< D 0B B < B= ?; ?< ?B D ;AB BY < D, R , ; < < ;AB , @: , = ;AB =B B ?B < = , 2>0 , < ;AB " B ?A , ; ; , ? : UA ?A DA; , ; , @ < B ; HBD 6 2 B 8 @ < ;AB B ; B: < UA ?A B R , D , U , 0 0; 22: 0; , DB ; < 0 , @: 2B ; ? < , =: U , 0 ; < HB , 0B= ; < : B H@ , 0; B >< >0 ?< 0? F; < 6 d AB F B00 U , 0 ; < HB , 22 B H , ? D: , B= B : <E ?B0 < , 0 ; B B0: FB 0< 0 < < < =B 0: < 2@ 0< 0 < U =<U0: , 22 ; AB ?A 00?0 A ; AB ; < BWB F; : UB B ; < HB 0>HNB?; ; < ; 6 < F <E =B > =0 ; AB ??B D@ UB B < =B B= ; < 0B = ; < ; AB ; , 22 ?A> ?A F2 , ; B 0 , EB 0>?A , 0 U , 0 0; ?; 2@ B?B00 , @ < ;AB ?B2BH , ; < < < ;AB 0 , ? , B ;0: , = , 22 F E , ;B ? ; RB 0 UB B H ==B ; < ; H>; B < B A , 2 < < ;AB ; , H2B 0 2EB 6 < =B ; < F <E =B ; B , 0 < ;AB , ; 22B @ V UA ?A A , = 2<0; B , 2@ , 22 ; 0 A< 0B0 , = D> 0 , ; ? , V , 0; ?; BM> 0 ; < < = , >DA; , , 20 U , 0 HBD> , 22 <EB = , 2>0 , 6 # D BB 0 UB B 0B ; <>; ; < < ; @ , 22 ; AB F , 00B0 < ;AB B , 1 < B , : U ; A FB 00 < ; < BW , ?; < ?B= 2 , H<> < < ;AB FB , 0 , ; @ < ;AB A 22 ?<> ; @6 A BB B HB 0 < ;AB C> ; , V 22 , HB: M>B2 B , = , F< , D , =< V UB B 0B ; ; < B R , D , 8 AB , = M> , ; B B , ; % , , <2 , , 0 B2= =BF>; B0: 8 ; < 0; > F < 0>FF< ; ; AB B B D@ < ;AB ?< , =B ?A B 6 A 0 U , 0 , =BE ?B H< <UB= < ;AB F , ?; ?B < ;AB " B ?A BE<2>; < : , = A , = < HB; ; B B B?; ; A , DA; A , EB HBB BWFB?; B=6 0 45 : ; AB BF B0B ; , ; EB0 < 1 00 < 8 1 B B ; AB >0B2B00 < F<0 ; EB2@ A , >26 AB@ B ; AB U 0AB= ; < ; A >0; , , ; B> 0A F2 , 0 < ; AB <U >F< ; AB 2 ; , @ B : < , ; 2B , 0; = 0; , ?; B= ; AB H@ ?< 0; , ; M> 0 ; < , 2 0>FB E 0 < 6

; AB UA<2B ; AB B B?; < ; A 0 E<22B@ < E <2B ; =B? BB0 U , 0 0 , 226 & ; A 0 W < ; A0 ; < ?, @ ; AB <>; ; AB@ DA; : < =<>H; : A , EB F <=>?B= D B , ; B0>2; 06 $>; U ; A B UBB 0 , ; B ; AB = 0 , 0; B < ? , , ; AB " B ?A A , = ?< B ?B= ; AB , ; ; , ? : , = ; A , ; 0F , ?B < ; B 2 ; ; 2B A , = HBB , ??< F2 0AB=6 AB < B@ U , 0 HBD D ; < ?< B : ; AB 8B? > ; 0 UB B HB D ?<22B?; B=: H>; A , = <; HBB , B= < ?2<; AB=: 0; 22 2B00 = 22B=6 ; AB < ; ?, ; < 0 ; AB F , 00B0 , @ A , = HBB 0 B; ?AB= <>; : H>; < 2@ , BU A , = HBD> ; < ; , B ; , D H2B 0A , FB6 < , ; AB ; AB B U , 0 0; 22 < 2@ ; AB U B? 0 < B R , D , 8 <2= , @: UA ?A A , = A , =2@ HBD> ; < B?B EB ; 0 = , ; 0 < ?< 0? F; 06 ; 0

HB < B' ?, ,' A,=' HBB ' <>DA;', ='2<0;:' & B22 D;< ' A,=' HBD> ' ;<', <> ?B' A 0' ;B ; < ' < '2B,E D' $,=,N<R', ='B; D' U ;A ' ;AB' H<> =, BO' < ' +< ;>D,26' B' A,=' F, =' ,' 2@ D' E 0;' ;<' BE 22B' < ' ;AB' = O;A' ' < ') <EB HB :' N>0;' ,0' B R,D,8O' > A,FF@' ,=E, ?B' ;<' %,' 1, ?A,' U,0' ?< B ? D6' AB' F <NB?;' A,=' HBB ' ?< ?B,2B=' < ' A ' ', =' UAB ' AB' 2B, ;' < ' ;' AB' A,=' BWF B00B=' A 0' B ; B' = 0,FF <H,; < ' < ' ;:', =' A,=' B >0B=' ;<' D EB' , @' F < 0B' ;<' 0>FF< ;' ;AB' F, 0A' , BO' ' ;AB ' < B 0 EB' <EB B ;06' "< ' ;A 0' B,0< ' AB' A,=' HBB ' H ;;B 2@' F <E< B=' UAB ' B R,D,' , =' 2H>M>B M>B' H<;A' 1 <;B' A :',' 2 ;;2B' 2,;B :';<' 0,@' ;A,;' ;AB@' A,=' HBB ' F < 0B=' ;AB',00 0H\ ??' < ' A 0', @' H@' ;AB' C> ;,' B' A,=' ?< 0 0;B ;2@' F <FAB0 B=' 22' < ' ;AB' ,=EB ;> B:', =' A,=' B?< =B=' A 0' <F < ' ;A,;' H<;A' * B2' +, M>B' , =' B R,D,' U<>2=' F <H,H2@' 2<0B' ;AB ', BO6' ',' = 0F,;?A' < ') <EB HB ' :' 0 W' =,@0' HB < B' ;AB' BU0' < ' ?, ,' B,?AB=' A :' AB' A,=', <> ?B=' A 0' =B ;B' ;B ; < ' < '2B,E D' $,=,N<R' U ;A' ;AB' , ' H<=@' < ' A 0', [:', =';, 0 B D' A Y 0B2 ';<' ;AB' < ;A' < ' ;AB' ,D>0:' UAB B:' H@' F<0; D' A 0B2 ' ';AB' +< ;>D>B0B' F <E ?B' < ' $B ,:' AB' U<>2=' ?<EB ' ;AB' A DA <,=0' ;<' % 0H< ' < ' 2=' ,0; 2B6' A 0' =B? 0 < ' U,0' <> =B=' < ' A 0' HB2 B ';A,;' UAB ';AB' " B ?A' A,=' ,=B', 'B =' < ' B R,D,', =' * B2' +, M>B V ,' ?< ; DB ?@' UA ?A' AB' BD, =B=',0',2 <0;' ?B ;, 'TV' ;AB@' U<>2=' 0; B' ,;' % 0H< ' , =' <;', ;' BE 22B6' B' A,=' D<<=' B,0< 0' < ' A<2= D' ;A 0' E BU7' ;' U,0' BW,?;2@' ?< 0< , ;' U ;A

' B' ;AB ' F>0AB=' < ' ;< ,=R:' UAB B' AB' U,0' < ' ;2 B' (;A 4;A:' 0FB ;',' DA;', ;' BE 22B',D, ' < ' ;AB' 5;A ;A:', =' U,0' H,? ', ;' $,=,N<R' < ' ;AB' ;A' < ') <EB HB 6' ;' ,=R' AB' F, ;B=' U ;A' A 0' H <;AB :' UA<' U,0'N>0;' B H, D' < '# D2, =:' ;<', B' >F' A 0' F2,?B' ';AB' BU' 1 0; @6

T' 0' 2,;B',0' ?;6' 'AB' A,=' U ;;B ';<' <2< B2' <?AB:';AB' $; 0A' < ?B ',;;,?AB=';<';AB' 0;, '< ';AB' @' < ';AB' B ; B:';<' HBD' A ';<' F B00' < ';AB' BU2@ , EB=' B R,D,';AB' B?B00 ;@' < ' ,=<F; D' ,' =B B 0 EB' F<0;> B:', =' 0 D' <;A D6' " < ';AB' U< = D' < ';AB' 2B;;B ';' 0' ?2B, ';A,;' <' A ;' < ';AB' < =B 0' 0B ;';<' B R,D,' < ' BE 22B' A,=' B,?AB=' $,=,N<R6' M%33 5' ' 1 () ' #%(' E6' O 5:' 0BB',20<';AB' = 0F,;?A' ;<' ,0;2B B,DA' < ' F6' 46

^ BB' & B22 D;< ';<' <?AB:', =';<' $6' " B B:' $,=,N<R:') <E6' 56' 1 (0) ' #%(' . 6' 5 ', =' 5O6

* !') <;A D' ?, '0,EB' ;AB '0, <',' E ?;< @' H@' B R D,', =';AB' F<00B00 < ' < ' 1,= =:' G# #' %' '#%' (") = =3%' '%2% '(' 6 6 6 ' * B2' +, M>B', =' 2H>M>B M>B', B' =B0; <@B=:' G# #' (' ": 3 E%3;' .%%.') %'';' % ' '6 6 6 UB' >0;', B'<> ', , DB B ;0' < ';AB' =B B ?B' < ' +< ;>D,26' . B22 D' ;< ';<' $B B0 < =:') <E6' : 56

=> ,:' , =' ;<' , , DB' ;' 0<' ,0' ;<' ?<EB ' % 0H< :' BEB ' ;A<>DA' H@'
, D' ;A 0' <EB B ;' AB' U,0' UB, B D' ;AB' 2B ;' 2, ' < ' ;AB'
=B B ?B' < ' =,2>0 ,6' ' AB' A,=' ;<' ?A<<0B' HB;UBB ' ;AB'
;B B0;0' < ' +< ;>D,2' , =' ;A<0B' < ' F, :' AB' U,0' F BF, B=' ;<'
0,? ?B' ;AB' 2,;;B 6' 0' B,0< 0' UB B' 0 F2B6' I J' AB' ?< 0 =B B='
+< ;>D,2' < B' F< ;, ;' ' ;AB' D , =' 0; ,;BD@' < ' ;AB' =B B ?B'
< ' ;AB' +B 0>2,' ;A, ' =,2>0 ,7' I J' AB' BD, =B=' ;' ,0' < B'
=B B 0 H2B:' , =' AB' A,=' ,2 B,=@ V ,0' UB' 0A,22' F B0B ;2@' 0BB V'
0 B;?AB=' <>;' , =' ?< B ?B=' ;AB' ?< 0; >?; < ' < ' A 0' 0 B,;'
2 B0' < ' < B0' . B= ,0:' ' UA ?A' A 0' ; 8>0;' ,0' ,' ,2' F BD ,H2B'
0; < DA<2=' U,0' ,2 B,=@' WB=' 7' I J' AB' AB2=' ;A,;' ,2;A<>DA' (B,;'
$;, ' U,0' F2B=DB=' ;<' ,00 0;' H<;A' F, ' , =' +< ;>D,2:' @B;' AB '
< ,2' <H2 D,; < ' ;<' ;AB' 2,;;B ' U,0' , ' < B' H = D:' 0 ?B'
+< ;>D,2' A,=' F2,?B=' AB 0B2 ' B ; B2@' ' ;AB' A, =0' < ' AB ' ,22 B0:'
A,=' F>;' AB ' , @' ,;' ;AB ' = 0F<0,2:' , =' =' ?< ; H>;B=' ,22' AB '
B0<> ?B0' ;<' ;AB' ?< < ' ?,>0B:' UA 2B' ;AB' F, 0A' C> ;,' A,=
0A<U ' ,' NB,2<>0' , =' 0>0F ? <>0' 0F ;:' A,=' 8B >0B=' ;<' 0A<U'
?< =B ?B' ' (B,;' $;, :' , =' A,=' FB 0 0;B=' ' ?, @ D'
<>;' ,' 2 ;, @' F<2 ?@' < ' ;0' <U :' UA ?A' 2B=' ;<' ,' ?< 0 0;B ;'
0B B0' < ' = 0,0;B 07' IOJ' ;AB' +< ;>D>B0B' , @:' ;A<>DA' ;0'
DA; D' F<UB ' U,0' <;' ,0' @B;' ,0?B ;, B=:' ?<>2=' HB' ,;' 2B,0;'
B2 B=' >F< ' < ' <HB= B ?B7' BWFB B ?B' A,=' 0A<U ' ;A,;' ;AB'
F < 0B0' < ' ;AB' F, , =0' ?<>2=' <;' HB' ; >0;B=:' , =' ;A,;' , @'
?, F, D ' > =B ;, B ' ' ;AB ' ?< F, @' DA;' HB' & B? B=' H@'
0< B' ?,2?>2,H2B' F B?B' < ' 02,? B00' < ' 0?,2?>2,; <
??< = D2@' < ') <EB HB ' ' & B22 D;< ' =B?2, B=' A 0

& B22 D;< 8O' , D> B ;0' >0;' HB' ?>22B=' < ' A 0' E, <>0' = 0F,;?AB0';<'
%< =' % EB F<<2' , =' <;AB ' 0;B 0' ') <EB HB ' , =' * B?B HB ' 56'
"< ' ;AB' 0;' < ' ;AB' <; EB0' M><;B=' ,H<EB' 0B?' & B22 D;< ' ;<' % EB F<<2'
* B?6' 56' K' 2 B' <HNB?;' ' <??>F@ D' ;A 0' F <F<0B=' F<0 ; < ' X ' $B ,S' 0';<'
HB' ,;' ;AB' F< ;' < ' ;AB' =B B ?B' < ' +< ;>D,2:' ;<' = EB ;' ;AB' ,;;B ; < ' < ' ;AB'
" B ?A' < ' ;AB' <>;A' < ' F, :' UAB ' ;AB@' 0A,22' B?B EB' ;AB ' B < ?BY
B ;0:' , =' ;A>0' ;<' D EB' ; B' ;<' ;2 B' F, 0A' (<EB B ;' ;<' BF, ' ;AB '
2<00B06' 6 6 6' ;' 0' ,H0<2>;B2@' B?B00, @' ;<' ? <00' ;2 B' ,D>0' B= ,;B2@:' ,0' ;'
,@' HB' =BFB =B=' >F< ' ;A,;' ;AB' B B @8O' 0;' B < ;:' , ;B ' B?B E D' A 0'
B < ?B B ;0:' U 22' HB' >F< ' ;2 B' ; <<FO' ;<' ;AB') < ;A' < ' ;AB' ,D>06' . B @'
>?A' ;AB' 0, B' <F < ' 0' BWF B00B=' ' ;AB' B, 2 B' = 0F,;?A' ;<' %< =' % EB F<<2'
< ') <EB HB ' O6' #WF B00 < 0' < ' . B22 D;< 8O' ?< E ?; < ' ;A,;' ;' U,0'
F<00 H2B' ;<' ?< <FB ,;B' U ;A' ;AB' C> ;,' < ' ;AB' F, 0A' DB B ,20' ,@' HB'
<> =') ((' ' ,22' A 0' ?< =B ; ,2' 2B;;B 06' BB' < ' BW, F2B' ;A,;' ;<' 'C6'
0; >;AB :' FF6' (' < ' 9 :)) 3% % ' ;' 1 () ' #%(' E<26' E 6

Spanish Infantry 1808

(showing the old Bourbon uniform)

U ;A' ; 2 D' =B < 0; ,; < 06 ';AB' B B @' 0A<>2=' ?A<<0B' ;<' 0; B' H@' 2 ,=B ' ,;' < =<E,:' ;AB' F, 0A' ?B ; B' , =' DA;' U D' U<>2=' HB' ?>;' < ' < ';AB ' B; B,;' < ' BE 22B:' , =' U<>2=' A,EB' ;<' ;, B' B >DB' ';AB' D=< ' < ' 1 > ? ,6 ';AB' *B0 ' FB , +B <0' , =' ;0' B DAH<> 0' 0A<>2=';> '<>;';<' HB';AB'0B2B?;B=' <HNB?; EB:' B R,D,80' DA;' U D' >0;' 0> B ';AB'0, B' ,;B6 =:' '= EB ' < ';AB' F,00B0:' ;AB', @' U<>2=' A,EB';<' B ?<> ;B :' ' ;AB' H <,=' F2, 'HBA =:';AB'<EB F<UB D' < ?B'<' " B ?A'?,E,2 @' UA ?A' 9 D' C<0BFA' ?<>2=' H D' >F6 AB' F <H2B ' 0B;' HB < B' ;AB' =B B ?B' U,0' ,' A<FB2B00' < B:' , =' <0;' < ';AB' DB B ,20' > =B ' B R,D,' UB B' ,U, B' < ';AB' ,?; V ,0' =BB=' UB B';AB' , ', =' 2B6 * 0,0;B ' U,0' H<> =' ;<' <22<U' ';AB' B B @:' , ,DB=' A 0' H>0 B00' U ;A' < = , @' F >=B ?B6

% & " ' O) N' % ! $ '

#') ` ' # ' "') * % ' :' 9) (' C #+
) *' ' +%) 6

$ " ' ?< 0 =B D' ;AB' ,?; < ' < ';AB' " B ?A' , ;B ' ;AB' E ?;< @' < ' ?, ,:' ;' 0' B?B00, @' ;<' B B HB ' ;A, ;' 9 D' C<0BF2 ' , =' <>2;' UB B' <;' ' ;AB' F<0 ; < ' < ' < = , @' E,=B 0:' UA<' A,EB' N>0;' 0>??BB=B=' ' =B <2 0A D' ;AB' 2,0;' , @' < ' ;AB ' B B @6' ' U, 0' < ',' < ,2' ;@FB' ;AB' E ?;< ' <U0' ;A,;' ;AB' E, M> 0AB=' U 22' 0>B' < ' ;B 0' UAB ' > ;AB ' B0 0;, ?B' ,FFB, 0' A<FB2B007' AB' F <?BB=0' ;<' = ?;,;B' ;AB' ?B00 < 0' < ' ;B ;< @' < ' F,@ B ;0' < ' =B ; B0' ;A,;' AB' ;A 0' F <FB :' ,0' ;AB' F ?B' < ' FB,?B6' $>;' ;' U,0' <;' ,' F < ;,H2B' ; B,;@' UA ?A') ,F<2B< ' =B0 B=6' AB' A,=' F>;' ;' <>;' < ' A 0' <U ' F<UB ' ;<' B =' ;AB' U, ' ' 0>?A' ,' ,0A < :' UAB ' AB' =B?2, B=' A 0' H <;AB ' 9 D' < ' F, 6' "< ' A ' ;AB B' U,0' <' F, 0A' D<\B B ;' ' BW 0;B ?B' 0,EB' ;A,;' UA ?A' AB' A,=' 0B;' >F' ,;' 1 ,= =6' ;AB' B ; ,2' C> ;,:' , =' ;AB' < ;B0' UAB ' ;' 0A<>2=' BB;:' UB B' B B' 22BD,2' ,00B H2 B0:' U ;A' UA ?A' AB' ?<>2=' <;' =B D ' ;<' B ;B ' ;<' BD<; ,; < 06' ;' U,0' <U' FB B?;2@' ??B, ' ;A,;' ;AB' F, , =0' U<>2=' BEB ' 0>H ;' < ' ;AB ' <U ' ,??< =6' AB ' F<0 ; < ' ' * B?B HB ' 5:' =B0FB ,;B' ,0' ;' DA;' HB:' U,0' <' U< 0B' ;A, ' ;' A,=' HBB ' ' ;AB' 1 , ?A' < ' ;AB' 0, B' @B, 6' B R,D,80' , @' A,=' 0> B B=' <' < 8B' ,;' ?, ,' ;A, ' A,=' ;A<0B' < ' >B0;,' , =' , ;,<N,2' B' < ;A0' HB < B:' < ' ;AB' = 0,0; <>0' B2=0' < ' 1 B=B22 ' , =' >=,=' B,26' =BB=:' ;AB B' UB B' F <H,H2@' < B' B ' ,?;>,22@' ' 2 B' ;<' =B B =' =,2>0 ,' ' * B?B HB ' ;A, ' ;AB B' A,=' HBB ' ' F 2:' A2< B<EB :' ' ;AB' B, 2@' 0F D' <>2;' A,=' HBB ' ' ;AB' >22' ?, BB ' < ' ?< M>B0;' ' +< ;>D,2:' , =' <;A D' 0,EB' ,=<? 80' 0 D ?, ;' < ?B' ,FFB, B=' ;<' F BEB ;' A 0' < U, =' , ?A' ;<' % 0H< 6' ;' =Y U ;B :' < ' ;AB' <;AB ' A, =:' ;AB' 2, ' < ' =,2>0 ,' U,0' ?<EB B=' H@' & B22 D;< 80' E ?;< <>0' , @:' , =' H@' ;AB' B< D, RB=' +< ;>Y D>B0B' A<0;' < ' $B B0 < =6' ' ;AB' C> ;,' A,=' B >0B=' ;<' 2 0;B ' ;<' ;AB' 0 = <>0' ,=E, ?B0' < ' <;B2<' ' F 2' T:' ;AB B' U,0' <' B,0<

' BB' E<26' 6 FF6' 2 ';2 *6

;<' 0>FF<0B' ;A,;' ;' U<>2=' 2B =' ,' B,=@' B,' ;<' ,@' 0 2,' ,=E<?,;B' <' 0>H 00<' ' *B?B 2N? 6 =BB=:' ;0' BEB @' ,?;<' 0A<UB=' ,' B0<2EB' ;<' DA;' <>;' ;AB' 2<0 D' D, B';<';AB' B =6

C<0BFA' $< ,F, ;B' U<>2=' BEB' HB' 9 D' <' F, ';22' BEB @' F <E ?B' U,0' AB2=' =<U' H@' " B ?A' H,@< B;06) <;' < 2@' >0;' B,?A' ?< B' <' ;AB' 2, =' HB' ?< M>B B=:' H>;' , ;B' ?< M>B0;' ;' >0;' HB' D, 0< B=6 "< :' UAB B' ;AB B' U,0' <' D, 0< :' 0> B?Y ;<' H> 0;' <>;' ,;' < ?B:' , =' ;AB' UB, @' F <?B00' <' F,? ?,;<' A,=' ;<' HB' BFB,;B=6

;' U,0' ;A 0' 2,0;' ,?;' ;A,;' B0; , B=' 9 D' C<0BFA' < ' <22<UY D' >F' A 0' F> 0> ;' <' ;AB' E B? 0' <' ;AB' F, 0A' , @' ;<' ;AB' B ,' 1< B ,:' , =' ;AB' D,;B0' <' BE 22B:' <' ;AB' < D', ;B' ?, ,6 <' , B' >F' ;AB' A<0;' ;A,;' A,=' =B B,;B=' B R,D,:' , =' ;AB' <;AB' 0 ,22B' < ?B' ;A,;' U,0' =B,2 D' U ;A' * B2' +, M>B' %B< :' ;AB' 9 D' A,=' HBB' < ?B=' ;<' ?< ?B ; ,;B' ,22' A 0' = E 0 < 0:' , =' ;AB' ?< 0BM>B ?B' A,=' HBB' ;A,;' ;AB' ?< ; <2' <' ;AB' H <,=' ; ,?;0' HBA =' A' A,=' HBB' 2<0;6 & B' A,EB' ,2 B,=@' A,=' <??,0 <' ;<' B ; <' ' ;A,;' ;A <>DA<>;' 2=' ,0; 2B' , =' %B< :' ;AB' <FB' ?<> ; @' U,0' <U' ;AB' A, =0' <';AB' D>B ' B <0:' UA<' A,=' HBB' D <U D' ' < ?B' , =' > HB 0' BEB' 0 ?B' ;AB' ; B' <' ,2,EB ,:' , =' A,=' 0B' ;<' ;AB' AB DA;' <' ;AB' ?< =B ?B' , ;B' ;AB' =,@' <' , , B0:' , =' * B2' +, M>B8 0' BFB,;B=' <??>F,;<' <' ,2, , ?,6),E, B:' , =' , @' F, ;0' <') BU' ,0; 2B' UB B' BM>,22@' = 0;> HB=:' , =' ,D< :' UA ?A' >?AB;' A,=' ;, LB=' => D' ;AB' ,>;> :' U,0' HBD D' < ?B' < B' ;<' <EB6 AB B' UB B' <' " B ?A' ; <<F0' ' ;AB' = 0;> HB=' BD < 0' 0,EB' 0?, ;@' D, 0< 0' ,;' $> D<0:' . ,22,' =<2 =:' $B ,EB ;B:' E 2,:' BD<E ,:' (>,=,2,N, ,:' +,2B ? ,:' >=B2,:' , ,22,:' , =' ,' BU' <;AB' 0; ,;BD ?' F< ;06 AB0B' UB B' ?>;' <' <' B,?A' <;AB :' , =' < ' 1 ,= =:' 0,EB' UAB' ,' D<EB < '0B ;' <>;' A 0' B00B DB' U ;A' , ' B0?< ;' , @' A> = B=0' 0; < D:' , =' BEB' 0>?A' ,' < ?B' A,=' < ;B' ;<' DA;' ;0' U,@' ;A <>DA' A,2' ,' =<RB' H, =0' HB < B' B,?A D' ;0' =B0; ,; < 6 AB' D, 0< 0' ;AB 0B2EB0' UB B' <;' ,2U,@0' 0, B6 0<' F<UB >2' UB B' ;AB' H, =0' < '0< B' < ' ;AB' D>B 22B <' ?A B 0' ;A,;' ;AB@' ,0F B=' ;<' U,D D' BD>2,' U, :' , =' = =' <;' ?< B' ;AB 0B2EB0' ;<' H2<? D' ;AB' <,=0:' < ' ;B Y ?BF; D' ?<> B 0' , =' ?< E<@06 AB' # F?? ,=<:' UA<0B' 0FAB B' < ' ,?; E ;@' 2,@' < ' ;AB' H< =B 0' < ' 2=' , =') BU' ,0; 2B:' D<;' F<00B00 < ' < ' (>,=,2,N, ,' < ' ,' =,@:' ;A<>DA' AB' B; B=' UAB

' ;AB' = 0F , ;?A' UA ?A' =B; , 2B=' ;<' ;AB' 1 0;B ' < ' & , ' , ;' +, 8 0' ;A 0' = 0F<0 ; < ' < ' ;AB' , @:' <>2;' BWF2, B=' A 0' B,0< 0' < ' A<2= D' H,? 6' ;' U,0' ,' < B' F B00 D' B?B00 ;@' ;<' B0;< B' < =B ' ' ;AB' F <E ?B0' < ' ;AB' ;B < ' ;A, ' ;<' F> 80 B' ;AB' U B? 0' < ' B R, D, 80' < ?B:' UA ?A' U,0' 0<' ?< F2B;B2@' = 0FB 0B=' ;A, ;' <' > ;AB ' =, DB ' BB=' HB' B, B=' < ' ;6' $B < B' > =B ;, D' , @' 2, DB' DB B ,2' 0?2 B' < ' <FB , ; < :' ;AB' 9 D' ;A<>DA;' ;' HB0;' ;<' ?< 0>2;' A 0' FB ,2' H <;AB ' ,0' ;<' A 0' U 0AB06' ;' U,0' > <> B=' ;A, ;') , F<2B< ' A 0B2 ' DA;' , FFB, ' < ' ;AB' 0?B B' U ;A ' ,' BU' UBB 0:' , =' ;' U,0' ?B ; , ' ;A, ;' ;AB' 0;' ?<2> 0' < ' B < ?B B ;0' < ' (B , @:' UA ?A' DA;' F <EB' ;<' HB' ;AB' AB ,2=0' < ' A 0' , FF <, ?A:' UB B' N>0;' , H<>;' ;<' ? <00' ;AB' $ =, 00<, 6' 1 < B<EB :' ;' U<>2=' HB' F >=B ;' ;<' = 0?<EB ' UA, ;' A, =' HB?< B' < ' 2H>M>B M>B' , =' < ' ;AB' # D2 0A:' HB < B' , @' D B, ;' <EB' ;<' ;AB' 0<>;AU, =' U,0' , =B:' ,0' ,20<' ;<' , B' , ' B =' < ' ;AB' , @' < ' * B2' +, M>B:' H@' B, 0' < ' ;AB' B < ?B B ;0' UA ?A' A, =' N>0;' HBB ' 0B ;' ;<' 9 B22B , 6

& ;A ' ;A BB' UBB 0' ;AB' 0 ;>, ; < ' A, =' ?A, DB=:' , =' , @' < ' ;AB' B, 0< 0' UA ?A' A, =' =>?B=' ;AB' 9 D' , =' <>2;' ;<' , =<F;' ,' U, ; D' F<2 ?@' A, =' = 0, FFB, B=6' ') <EB HB ' ;A:' ,0' UB' A, EB' ,2 B, =@' 0BB :' 9 B22B , ' <>;B=' * B2' +, M>B' , ;' 2H, ' =?' < B0:' ;A<>DA' AB' A, =' <;' @B;' B?B EB=' ;AB' 0>??<> 0' UA ?A' (, R, ' U,0' H D D' >F' ;<' A 0' , =6' AB' @' < ' ;AB' %B ;

K' <>2;' ;<' 2, B:') <E6' G' !' ,' 1 , NB0;B' ,' FB, 0B' M>8 2' B;, ;' >; 2B' M>8 B22B' 08 B D, DB, ;' EB 0' 2, ' B ,' 1 < B ,:' ,'2, ' F<> 0> ;B' ?2B0' =BH 0' =B' , BB' =B' 2, 1 , ?AB:M>8< BF<> , F2>0N< = B:B;' M> ' 0B0, >EB ; = E =>B22B B ;' 0> ' ;<>;B0' 2B0' = B?; < 0:' =8, >; , ;' F2>0' M>B' ;<>;' F< ;B' ,' ? < B' M>8 2' @' , > ,' B ?< B' =B0' <>EB B ;0' 0> ' 2, = < ;B:' B;' M>8 2' ?< E B ;' =B' 0B' B;; B' B>' B0> B' =B' BF<>00B ' 2B0' <>EB, >W ?< F0' X 2H>M>B M>B:' * B2' +, M>B:' , =' ;AB' # D2 0HS' M> ' F<> , B ;' 0B' F B0B ;B ' F<> ' 2, ' < ?B 6' ' B0;' , >00 ' F B00, >;' =B' F B = B' =B0' = 0F<0 ; < 0' F<> ' B;, H2 ' 8< = B' B;' 2, ' ; , M> 22 ;B' =, 0' 2B0' F <E ?B0' =B' 8 ;B B> :' B;' F<> ' , 00> B ' 2, ' 2 HB ;B' =B0' ?< > ?, ; < 06' F B0' 2, ' H, ; , 22B' =8 ?, >, ' 2B' < ' ,' , >00 ' B ' E>B' =B' 0B' B;; B' B ' B0> B' =8, ; ;B = B' M>B' ,' 1 , NB0;B' %8 # FB B> ' , ;' N>DB' ,' F <F<0' =B' , B' ?< , ; B' 0B0' ;B ; < 0' 0> ' 2B0' <FB , ; < 0' >2;B B> B0' M> ' =BE < ;' B; B' , ;B068' 2 B' B ; B2@' ,20B' 0>FF<0 ; < ' ;A, ;' 2H>M>B M>B' , =' ;HB' # D2 0A' UB B' < ' ;AB' <EB' U, 0:' ,0' <>2;' , ;B U, =0' BWF2, B=:' =>B' ;<' ,' = 0F, ;?A' B?B EB=' < ' B>=B2B;' , ;' 2, 2, EB ,:' UA<' 0B ;' ' , ' ,2, D' BF< ;' ;A, ;' & B22 D;< ' U, 0' BWFB?; B=' , ;' >W 22<' ' ,' BU' =, @06' 0' ;<' ;AB' =B, ' ;A, ;' * B2' +, M>B' DA;' N< ' 2H>M>B M>B:' ;AB' C> ; ,' A, =' , ?; >, 22@' D EB ' A ' , ' < =B ' ;<' =<' 0<' I0BB' F, DB' 54J:' H>;' AB' A, =' D < B=' ;:' , =' , ?AB=' < ' ,2, , ?, 6

5S #' %#) #' "' #' # 1 + # = =

; , ;' < ' ,226 AB' # FB < ' A , =' <;' @B ;' ,=B' A 0' ;B ; < 0'

<U 7 ;A<>DA' F B00B=' ;<' =B?2 , B' A 0' U 22' H@' BEB @' 2B ; ;B ' 0B ;'

H@' A 0' H <;AB ' < ' H@' <>2;:' AB' D , EB' <' , 0UB ' ,0' ;<' ,' DB B ,2'

F2 , ' < ' ? , F , D 6' BEB ,2' < ' A 0' = 0F , ;?AB0' A , =' B , ?AB=' 1 , = =6 ;AB@' UB B' >22' < ' =B ; , 20' ,0' ;<' ;AB' ; <<F0' UA ?A' AB' U , 0' 0B = D' , ? <00' ;AB' + B BB0:' ;AB@' ?< ; , B=' 0< B' , =E ?B' ,0' ;<' , ?B:' , =' 0< B:' BH> B0' < ' ;AB' 9 D' ?< ?B D' FB ; ;@' , ; ;B 0' < ' , = 0; , ; < ' H>;' ;AB B' U , 0' <' FB 00 < :' 0; 22' 2B00' , @' < =B :' ;<' E , =B' =, 2>0 ,' < ' +< ;>D , 27' < ' = =') , F<2B< ' =B D ' ;<' 0; , ;B' ;A , ;' AB' U , 0:' < ' U , 0' <;:' ?< D' ;<' F , ' ' FB 0< 6' ;' U , 0' < 2@' UAB ' C<0BFA' B?B EB=' ;AB' 0;' = 0F , ;?A' <FB D' >F' ;AB' , ; ;B ' < ' ;AB' = E< ?B' < ' C<0BFA B_:' ;A , ;' AB' U , 0' , H2B' ;<' D>B00' ;A , ;:' U ;A' 0>?A' , ' , , ' < ' A , =:' A 0' H <;AB ' U<>2=' <;' 0B;' <>;' < ' ;AB' +B 0>2 ,' => D' ;AB' U ;B ' < ' ;AB' B , 2@' 0F D6

$@' ;AB' ==2B' < ' * B?B HB ' C<0BFA' A , =' , =B' >F' A 0' =' ;A , ;' ;' U<>2=' HB' F<2 ; ?' ;<' , ; ; , ? ' =, 2>0 ,' U ;A<>;' =B2 , @6' B' A , =' U< ' <EB ' <>2;' ;<' A 0' =B , 0 V ;AB' 1 , 0A , 2' A , E D' <U' , H , =< B=' ;AB' F2 , :' UA ?A' AB' A , =' > DB=' 0<' 0; < D2@' ' ;AB' , >;> :' ;A , ;' % 0H< ' <;' BE 22B' 0A<>2=' HB' ;AB' <HNB?; EB' < ' ;AB' BW;' " B ?A' , =E , ?B6 ;' 0' B , 0@' ;<' > =B 0; , =' ;AB' 9 D80' F< ;' < ' E BU V AB' U 0AB=' , ;AB ' ;<' ?< F2B ;B' ;AB' ?< M>B0;' < ' A 0' <U ' B , 2 :' H@' 0>H=> D' ;0' UB , 2 ;A B0;' , =' <0;' F<F>2<>0' F <E ?B:' ;A , ' ;<' =<' A 0' H <;AB 80' U< ' ' +< ;>D , 2:' UAB B' AB' A , =' <' FB 0< , 2' ;B B0;6 ;' 0' 2B00' <HE <>0' UA@' <>2;' ?< ?> B=' U ;A' A V , 0' , ' D B , ;' 0; , ;BD 0;' AB' 0A<>2=' A , EB' B E 0 , DB=' ;AB' 0 ;> , ; < ' < ' 6 ; AB' 2 ; , @' , ;AB ' ;A , ' ;AB' F<2 ; ?, 2' F< ;' < ' E BU6

FF , B ;2@' C<0BFA' A , =' U< ' A ' <EB ' H@' D E D' A ' , 22' ;A , ;' AB' , 0 B=:' , =' ; B , ; D' A ' U>;A' B >0 EB' ?<> ;B0@6 ;AB ' <2=' M>, B20' < ' ;AB' F B?B= D' 0> B ' A , =' HBB ' B ; 8B2@' < D<;;B 6' ;' , @' , ;B' <>2;' A , =' <U' HB?< B' ;AB' , =B ;' , =E<? , ;B' < ' ;AB' E , 0 < ' < ' =, 2>0 ,' :' ;A<>DA V , 0' A 0' F B=B?B00< ' C<> =, ' ;B 0B2@' F>;0' ; V K' ;AB' # D2 0A' , @' HB D' <U' ;AB' < 2@' < D, RB=' < ?B' ' , ' 0; , ;B' ;<' , ?B' ;AB' FB , 2' ; <<F0:' , =' ;0' F B0B ?B' ' ;AB' +B Y 0>2 , ' HB D' ;AB' ;A D' ;A , ;' 0>0; , B=' ;AB' F , 0A' D<EB B ;' , =

T AB' # FB < ' 0?<2=0' A 0' H <;AB ' < ' <;' 0B = D' ;<' +, 0' ;AB' 2 , D0' ; , B ' , ;' ?, ,:' , =' < ' ?, 22 D' BH , 0; , 80' =' * E 0 < ' K' ;AB' +<2 0A' = E 0 < ' 8' 0; B , =' < ' K' ;AB' = E 0 < ' < ' ;AB' (, =' * >?A@' < ' & , 0 , U08

T ' , ' = 0F , ;?A' =, ;B=' < ' ;AB' , < ' < ' * B?6' 46

S C #+ 1 #) # +#)

A 0 U 227 ;AB >2; , ;B B0F< 0 H 2 ;@: ;AB B < B: 2,@ U ;A A 6 $>; AB B , B= < < =B D ;: < < , FF <E D ;: ;A>0 B0B E D ;< A 0B2 ,22 ;AB F<00 H 2 ; B0 < %6) (' ' ? ; Y ? 0 6 ?B <F <A H ; < ?, B: C<0BFA ,=B >F A 0 = ;< 0; B7 ; U,0 , ;> ,2 ;A , ; AB 0A<>2= HB ,0? , ;B= H@ ;AB =B, < ?< M>B D FB T0< ;AB < B D B , ; F <E ?B < F, UA ?A B , B= ; , ?; 6 H 22 , ; ?, F, D : UA ?A AB U<>2= D> B ,0 ?< , =B ?A B ,0 UB22 ,0 D: DA; , ; 2,0; ?< E ?B ;AB F, , =0 < A 0 ?, F, ? ;@6 B U,0 F BF, B= ;< F2,@ ;AB F, ; < , B ? >2 , = DB B <>0 ?< M>B < 6 ; ;AB U< 0; ;AB BEB >B0 < ;AB UB,2;A@ =,2>0 , U<>2= HB , D<=0B = ;< A 0 =BF ?;B= ; B,0> @6

U< F2, 0 UB B = , U >F < ;AB E,0 < 6 AB 0; U,0 < B ?,>; <>0: , = < B ?< 0< , ; U ;A ;AB 0; ?; >2B0 < 0; , ;BD@6 AB 0B?< = U,0 H<2=B , = F < 0B= < B B= , ;B B0>2;06 ??< = D ;< ;AB 0; ;AB 9 D U,0 ;< ?< ?B ; , ;B A 0 , , @ % , 1 , ?A, : , = ;< ;A B, ; ;AB F,00B0: U A 2B ;U< D B, ; 2, D ?<2> 0 ?, B= <> ; ;AB F B2 , @ ?< M>B0; < #0; B ,=> , , = . ,2B ? ,6 1 < ; B U,0 ; < , ?A U ;A ;AB ;A , = = < F0 >F< $, = ,N<R: ;< ? >0A 2H>M>B M>B: , = ;< <??>F@ ;AB E,22B@ < ;AB (>, = , 6 >2; , B<>02@ >?AB; U,0 ; < , B , F>0A < , D< ; < . ,2B ? , U ;A ;AB H>2 < A 0 ?< F0: UA 2B A 0 F2, ?B , ; , ,D<00 , U,0 ; < HB ; , B H@ , 2, DB < ?B = , U < ; AB BU2@ , EB= B < ?B B ;0 < " , ?B6 2@ UAB $, = ,N<R , = . ,2B ? , A, = ,22B : , = >?AB; , = 1 < ; B ?<>2= , =E, ?B F, ,22B2 U ;A A < B ;AB 2, : U,0 ;AB 9 D ;< , ?A , D, 0; BE 22B6 AB UB, F< ; < ;AB 0?AB B U,0 ; A, ; B ;AB $, = ,N<R < . ,2B ? , DA; , B , 2< D B0 0; , ?B7 ;AB D, 0< 0 <>DA; 2 B ; A, ; < (B < , ;AB ?B ; , 2 , =E, ?B < =,2>0 , DA; HB =B2, @B= < , =B ; B6

AB 0B?< = F2, : ;AB < B ; A, ; U,0 , =<F;B=: U,0 ; < 2B, EB ;AB = < F0 ,2< B ; < U, ; ?A 2H>M>B M>B , = #0; B ,=> , : ; < < =B >?AB; ; < , =E, ?B , D, 0; . ,2B ? , : H>; ; < 0; B 0; , DA; , ; BE 22B: U ;A<>; U, ; D < ;AB ?< F2B; < < B ;AB ;AB #0; B ,=> , < ;AB . ,2B ? , <FB , ; < 06 ;AB < D ,2 = , ; < ;A 0 ?, F, D B, 2@ ;AB UA<2B < ;AB 9 D80 , @

T ; ,@ HB <>>= 0B; < ;A >22 <>2;80 = 0F, ;?A ; < $B ;A B < C, 6 : 6

L C #+ + #+ # 9#

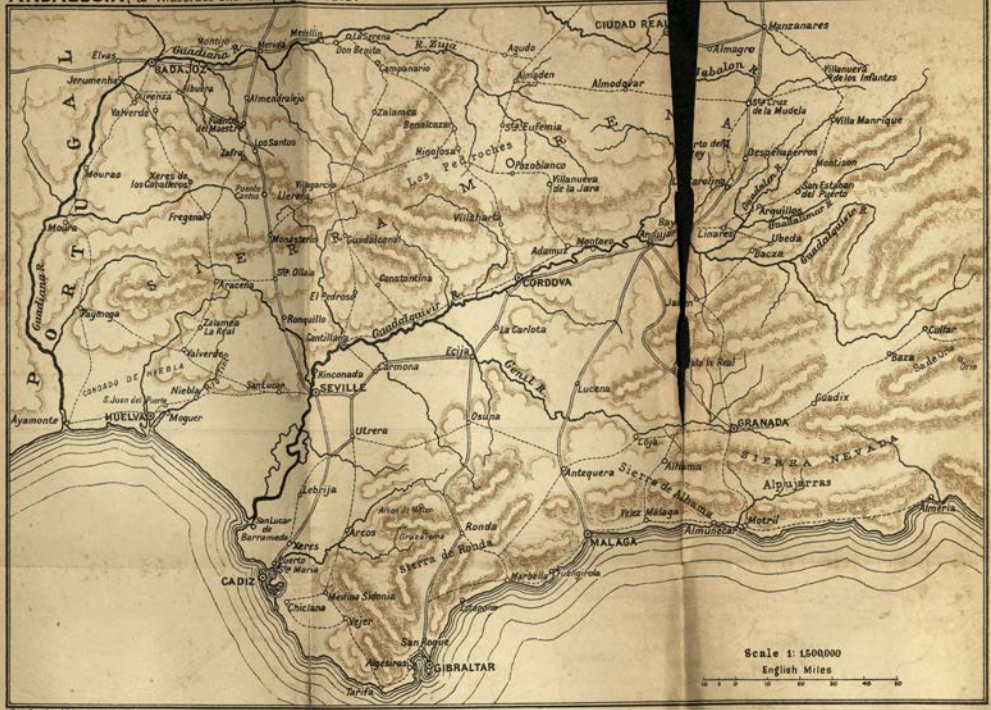
0F< = D <EB B ;6) B@ A,= <U B;> B= ;< ; , B ?< , = , ; ,2, , ?, : , = ;AB ?< =B ?B < 2 0 ; <<F0: 0A, B 0< BUA, ; H@ 1 , ?A, =80 ?, F, H2B 2B, =B 0A F: U,0 <U B0;< B=6 $BA =) B@ , = 9B22B , UB B ;AB > B ,H2B H, ; ,2 < 0 < ;AB BU B < ?B B ;0 < (B , @: ;AB AB,= < UA<0B ?<2> A,= <U B,?AB= $> D<06 AB 9 D80 B, : ;AB B < B: U,0 UB22 D>, =B= UAB AB HBD U A 0 D B, ; < B 0 EB <EB B ; ,D, 0; =,2>0 ,6

% & " ' O) N ' % ! $ '

#') ` ' # ' "') * % ' 6' C) ' ! "#$ ' !'

' ;AB' 5;A' < ' C, >, @:' :' ;AB' > < ;> ,;B' B R,D,' HBD, ' ;<' B?B EB' < ' ,22' M>, ;B 0' = 0F,;?AB0' UA ?A' 2B ;' A ' <' =<>H;' ;A,;' ;AB' ,;,2' A<> ' A,=' , EB=:' , =' ;A,;' ;AB' UA<2B' < ' A 0' 2 B:' < ' . 22, , M>B' < ' ;AB' B,0;' ;<' 2 ,=B ' < ' ;AB' UB0;:' U,0' ,H<>;' ;<' HB' ,00, 2B=' H@' ;AB' B B @6' " < ' BEB @' F< ;' < ' A 0' < ;' < ' ' 2B0:' A 0' 0>H< = ,;B0' 0B ;' A ' ' BF< ;0' ;<' ;AB' B B?;' ;A,;' 0; < D' A<0; 2B' ?<2> 0' A,=' ?< B' >F:' , =' A,=' ;A >0;' ' ;AB ' <>;F<0;06' =BB=:' 3B , :' < ' A 0' B <;B' ?, ;< B ;' < ' ;AB' BW; B B' 2B ;:' A,=' , <> ?B=' ;A,;' , ' <EB Y UAB2 D' < ?B:' ?< D' < ' ;AB' = B?; < ' < ' >=,=' B,2:' A,=' HB,;B ' A ' <>;' < ' ;AB' ;<U ' < ' 2 ,=B ' ,0' B, 2@' ,0' ;AB' ;A:' , =' A,=' ?< FB22B=' A ' ;<' B; B' ;<U, =0' ;AB' 0<>;A UB0;:' 2B,E D' ;AB' = B?;' <,=' ;<' < =<E,' > ?<EB B=6' A 0' U,0:' < ' ?<> 0B:' ;AB' ?< F0' < ' . ?;< :' UA<0B' 2, D' <EB B ;' U,0' ,2 B,=@' ;A B,;B Y D' ;<' ?>;' ;AB' 2 B' < ' ?< > ?,; < ' HB;UBB ' %,' , <2 ,' , =' BE 22B6' $>;' ;' U<>2=' ;, B' 0< B' =,@0' < ' ;AB' 0;' < F0' ;<' F,00' ;AB' >DDB=' =B 2B0' < ' ;AB' B ,' =B' %<0' +B= <?AB0:' UA ?A' 2 B' HB;UBB ' 2 ,=B ' , =' ;AB' E,22B@' < ' ;AB' (>,=,2M> E 6' ' BEB ' < B' F B00 D' =, DB ' 0BB B=' ;<' HB' < B0A,=<UB=' < ' ;AB' 2B00 B <;B' DA;' < ' ;AB' F, 0A' 2 B:' UAB B' . D<=B;' BF< ;B=:' < ' ;AB' F,00' < ' . '2, , M>B:' ;A,;' AB' A,=' HBB ' = EB ' ' ;<' A 0' ,2' DA; D' F<0 ; < ' ,;' 1< ; R< :' H@' ,' " B ?A' ?<2> ' , ?A D' >F' < ' . 22, >BE,' =B' 2<0' , ;B06' ' ;AB' ?B ; B:' ;AB' B B @' A,=' ,=E, ?B=' ;<' , ;,' >R' =B' 2,' 1>=B2,:' UAB B' ;AB' <,=0' ;<' ,22' ;AB' D <>F' < ' F,00B0' ,H<>;' ;AB' * B0FB , +B <0' H , ?A' < :' H>;' A,=' <;' @B;' 0A<U ' A<U' , @' < ' ;AB ' AB' ;B =B=' ;<' >0B6' B R,D,' ?<>2=' <;' =B;B B' UAB;AB ' 0< B' < ' ;AB' " B ?A' <EB B ;0' UB B' B B' =B < 0; ,; < 0:' < ' UAB;AB ' BEB @' < B' < ' ;AB ' F< ;B =B=' ,' B,2' ,;;,? ' < ' ;AB' < <U6' 6 3B , ' U,0' ;<<' , ' < ' ;' <' HB' AB2FB=' 7' H>;' . D<=B;80' =B , =0' < ' ,00 0;, ?B' UB B' 0<' F B00 D' ;A,;' ;AB' < , =B A B ' 0B ;' < T' ;<' A 0' , =:

ANDALUSIA, to illustrate the Campaign of 1810.



W. & A.K. Johnston Ltd. Edinburgh.

A 0 <FB , ; < 0 ;<' , ' , ; ; , ? ' , D , 0;' ;AB' , <U' < ;0 < ' ;AB' ;U<' F , 00B0:' H>;' , 00 , 2B=' ;AB' <>DA' A 220 =B' < ' B , ?A' 0 =B' < ' ;AB :' 0B = D' <>;' UA<2B' H , ; ; , 2 < 0 =BF2<@B=' , 0 0 0AB 0 ;<' ?2 H' ;AB' 02<FB06 ' (, R , 80 = E 0 < :' < B' H D , =B' , ?AB=' , D , 0;' ;AB' +>B ;<' =B2' 1 > , = , 2:' H>;' ;AB' <;AB ' UB ;' >F:' ' <FB ' < =B :' < ' ;AB' 0F , ?B' HB ; UBB ' ;AB' +>B ;<' , =' ;AB' F , 0A' B=<>H;' , ;' ;AB' <22 , =<' =B' . , 2=B , R< B06 2 , 2@:' * B00<22B0 , ; ; , ? B=' ;AB' +>B ;<' =B2' B@' U ;A' ,' BU' H , ; ; , 2 < 0:' H>;' 0B ;' ;AB' B0;' >F' ;AB' 2B00 < = , H2B' F< ; < 0 < ' ;AB' 2 , D' 02<FB06 (, =' , =' ;AB' 9 D80 B0B EB0:' B , UA 2B:' = =' <;' F B00 ;AB ' , ; ; , ? ' < ' ;AB' * B0FB , +B <0:' ; 22' ;AB' ; <<F0 < ' ;AB ' DA;' A , =' , 2 B , =@' HBD> ' ;<' = EB' ;AB' B B @' HB < B' ;AB 6

AB' B0>2;0 < ' ;AB0B' ; , ?; ?0 DA;' A , EB' HBB ' < B0BB ' < ' ;AB' 0;G (< 80 : ' B :' , ; ; , ? B=' H@' : :' UB B' = EB ' ' , ;' ,' F , ?B' ;A , ;' BEB ' D BU' < B' , F =6 AB@' ?<>2=' <;' =B B =' ;AB' F , 00B0:' HB? , >0B' ;AB' 02<FB0 < ' B , ?A' 0 =B' UB B' ;> B=' H@' ;AB' B B @6 AB ' 2 B' U , 06H < B ' ' ;U<' < ' ;2> BB' F2 , ?B0:' , =' ;AB@' 2B=' ' A , 0 ; B' =<U ' ;AB' B , ' < ' ;AB' B , :' ;<' B0? , FB' HB D' ? , FY ;> B=' H@' 2 , D' =B ; , ?A B ;0 UA ?A' UB B' F>0A D' < ' , ;' >22' 0FBB=' ;<' AB , =' ;AB ' < 6 AB' < B ;' ;A , ;' ;AB' * B0FB , +B 8<0 U , 0 ;> B=' H@' 1 < ; B 80 <EB B ;:' ;AB' ; <<F0 <??>F@ D' ;' A , =' ;<' B; B , ;' , ;' AB , =2< D' 0FBB=:' N>0 ;' , 0 (, =' U , 0 ?< B ? D' A 0 , ; ; , ? ' < ' ;AB 6 22' = =' <;' B; B' U ;A' 0> ? B ;' F < F ; Y B00 G ;AB' H , ; ; , 2 < ' ' ,' B=<>H;' < ' ;AB' <22 , =<' =B' 2<0 C , ' = B0:' < ' ;AB' DA;' 2 , ' < ' ;AB' A DA <, =:' U , 0 ?>;' < ' , =' ?, F;> B=' % ' ((%' 22' ;AB' D> 0 ' ;AB' F , 00 UB B' ; , B :' ;AB B' HB D' <' ; B' ;<' DB;' ;AB ' , U , @' =<U ' ;AB' 0;BBF' <, =' ' ;AB ' B , 6 ;B ' ;U<' A<> 0 < ' 0? , H2 D' , ;AB ' ;A , ' DA; D:' ;AB' , ' F , 00 , DB0 < ' ;AB' B ,' 1 < B ,' UB B' ' ;AB' A , =0 < ' ;AB' " B ?A6 AB' B0 < ' ;AB' A DA <, =' A , =' HBB ' B=' UAB ' ;AB' B; B , ;' U , 0 < =B B=:' H>;' = =' <;' U B? ' ;AB' # :((%% ' 0>?A' ,' U , @' , 0 ;<' F BEB ;' ;AB' B B @' < ' F> 0> D6 AB' 2<00B0 < ' ;AB' F , , =0 UB B' <' < B' ;A , ' ,' BU' A> = B=0 22B=' , =' U<> =B=:' , =' P ' F 0< B 07 ;A<0B' < ' ;AB' " B ?A' UB B' 2B00 ;A , ' ' ' , 2+6 AB B' A , =:' ' ; >;A:' HBB ' A , =2@' ;AB' 0B H2 , ?B' < ' ,' H , ; ; 2B6

' <>2;80 0; , ;B B ;' ;A , ;' AB' 2<0;' K 0< B' P' B '8 I <>2;' ;<' $B ;A B :' C , 6 J 0 <' =<>H;' ,' 2 ; ;2B' BW , DDB , ;B=6 $>;' 1 , ; B 80 E , 2>, H2B' ; , H2B0 0A<U ;A , ;' 1 < ; BE80 ?< F0:' UA ?A' = =' B , 2@' , 22' ;AB' DA; D:' 2<0;' < 2@

S C ')) " # 9) ( ) * . 2

;< F>0A < U , = H@ U , @ < ' HB= , , = $, BR , ' ;< C , B : UA 2B ;AB , ' ?<2> , ?AB= H@ $, @2B ' < ' =>N , ' , = < =<E , 6 ;' U , 0 A<FB= ;A , ;' BU0 < ' . ?;< ' U<>2= 0<< ' HB B?B EB=6 ' , 22 A , = D< B UB22: AB U<>2= A , EB B , ?AB= ;AB (> , = , 2M> E ' 0< BY UAB B ' ;AB B DAH<> A<<= < ' < =<E , : 0< , 0 ;< HB ' ;AB B , ' < ' , @ F , 0A < ?B ;A , ;' DA;' A , EB B ; B , ;B= < ' % , ' , <2 , ' ;AB = B?; < ' < ' BE 22B6

0 , ' , ; ;B ' < ' , ?; : A<UBEB : H<;A \ D<=B;' , = , 20< B R , D , ' U ;A ;AB U B? ' < ' ;AB ; <<F0 < ' ;AB ?B ; , 2 F , 00B0: A , = , H , =< B= , @ A<FB < ' ?<EB D BE 22B: , = A , = B; B , ;B= 0<>;AU , =0 < ' C , B 6 AB B U , 0 < < ?B UA , ;BEB ' 2B ;' >F< ' ;AB < =<E , ' <, =: , = ;AB 9 D B ;' < B0 0; , ?B >F< ' ;AB = < ' ;AB =6 ' ;AB 2 , ; ;B ' = , @ BH , 0; , 0: , E D ' < ;' < ' C , B : <> = ;AB F , 0A ?< , =B ?A B ' U ;A 0< B 4: ' < ' : ' B ' F BF , B= ;< =B B = ;AB ;<U 6 B ' , ; , ? B= , ;' < ?B: , = <>;B= ;AB0B = 0F ;B= ; <<F0: UA< , =B 2 ; ;2B < ' < 0A<U < ' B0 0; , ?B6 + , ?; ? , 22@ ;AB UA<2B < ?B UB ;' ;< F B?B0 6 ;AB " B ?A ? , F ;> B= < ;@ 0 W D> 0: <0;2@ ;A<0B < ' ;AB B0B EB ' F , ' < ';AB @ < ' = , 2>0 , : UA ?A A , = HBB ' =BF<0 ;B= ' C , B 6 ' ;AB U B? 0 < ' ;A , ;' > A , FF@ < ?B: B R , D , ' ? , B= < ' , 0 , 22 B , ;' ;< (> , = W ' ;AB B , 0 ; B ' <> ; , 0: B , ' ;AB H< =B 0 < ' 1 > ? , 6 % , ?@: U ;A , <;AB ' , ?; < : B; B= < ' (, , = , 6 $ >;' ;AB 2 , DB , N< ;@ A , = 2B ;' ;AB ' ?<2<> 0: , = = 0FB 0B= ;< ;AB ' A< B06

9 D C<0BFA , = <>2;' B , UA 2B: , =E , ? D > <FF<0B= , 2< D ;AB A DA <, = ;< < =<E , ' , = BE 22B: D<;' ;< ;<>?A , ;' =>N , ' U ;A ;AB , =E , ?B= ? , E , 2 @ < ' . ?;< ' < ' ;AB DA;' < ' ;AB = < ' C , >, @6 AB , ?A < ' ;AB 0;' < FO A , = HBB ' ;< 20< B ' ;AB BW; B B: H>;' , 2 <0;' > <FF<0B= 0 , EB H@ ;AB = Y ?>2; B0 < ' ;AB <, =6 ;B ' = E D 3B , 8 2 ; ;2B =B; , ?A B ;' <>;' < ' 2 , =B ' < ' ;AB ;A: ;AB@ A , = A , =2@ 0BB ' , ' B B @6 3B , ' , = A 0 ?<22B , D>B <F< 0 A , = B; B= H@ ;AB <, = ;<U , =0 BE 22B 0<>;A UB0;U , =6 . ?;< : ;A<>DA AB 0B ;' <>;' 2@ D F , ; B0 < ' ?, E , 2 @ ;< ;A B , ;B ' $B , 2? , R , ' , = <N<0 , : ;< A 0 DA;: A , = B , 22@ F>0AB= > ;AB ' ;< ;AB 2B ;: < ' ;AB B , 0 ;B <0;' < ' ;AB ;U< <>DA F , 00B0 UA ?A 2B , = ;< < =<E , 6 AB = , @ , ;B ' 2B , E D 2 , =B ' AB A , = 0B ;' A 0 , ; 22B @ H , ? ' ;< % , ' 1 , ?A , : ;AB = 2 , F = , ;B= , = , H , =< B= <, = ;< UA ?A AB A , = ?< ;;B= A 0B2 ' F <E D , H0<2>;B2@ F , ?; ? , H2B < ' , @;A D ;A , ;

P #) ` ' # ") * % ' A$ C2
U<>2= =B2 HB , ; B2@ 2B , EB BE 22B ; < ; O , ; B: , O ? , F , H2B < =B B ?B , = =<< B= ; < =BO; >?; < : , = A , 0; B H@ < ?B= , ?ABO ; < ; A <U A 0B2 ; < ; AB 02 , = ? ; @ UA ?A U , O =BO; B= ; < HB?< B ; AB BU ?, F ; , 2 < 0> DB ; F, 6 ' , H2B ; < < B0BB 0>?A , =BEB2<F B ; : C<0BFA U <; B ; < A O H <; AB < C, >, @ 4 ; A, ; BE 22B U<>2= F <H, H2@ 0>H ; U ; A<>; DA; D: , = ; A, ; AB6 U<>2= ; AB B ; B , = R K ((:) %

2H>M>B M>B8O <FB , ; < 0: UA ?A >2; , ; B2@ ; > B= <>; ; < HB ; AB <0; F< ; , ; 0B?; < < ; AB =, 2>0 , ?, F, D : BB= , U< = < BWF2, , ; < 6 ; U 22 HB B B HB B= ; A, ; : B, 2@ C, >, @: AB A, = , 00B H2B=: , ; * < $B ; < , = 1 B=B22 : ; AB 0 , 22 B2= < ?B ; A, ; AB ?<>2= ?< , =: , ; B F <E = D ; AB D, 0< < $, , N<R , = 2B, E D , =B; , ?A B ; , H<EB 2 , R ; < U, ; ?A ; AB " B ?A = < FO6 ; = = <; , <> ; ; < < B ; A, : B : < UA ?A 0< B : UB B ?, E, 2 @6 O F<0 ; < , ; * < $B ; < U, O ; B =B= ; < F <; B?; ; AB 2, < 3B , , = <F< 0: UA< 2, @ ; < A O DA; : ?<EB D ; AB F, 00BO ; A, ; 2B, = < 2 , =B < ; < < =<E, 6 C, >, @ ; A AB B?B EB= < 3B , ; AB B1O ; A, ; AB U, O , H<>; ; < HB , ; ; , ? B= , ; 2 , =B H@ , " B ?A ?<2> < , ; 2B, 0; : B 6 AB * > B F < F; 2@ HBD, ; < , ?A B, 0; U, = ; < N< A O ?<22B, D>B: , = B, ?AB= , F, , < < C, >, @ P; A6 B B AB U, O B; H@ ; AB < , ; < ; A, ; 3B , A, = HBB = EB <>; < 2 , =B < ; AB F B?B= D = , @: , = A, = = , U H, ? H@ $B , 2?, R, , = <N<0 , < ; < ; AB BE 22B <, = 6 <F< O < + <R< $2, ?< U, O B; D ; AB 0, B = B?; < 6 AB * > B ; AB B>F< ?< ??>=B= ; A, ; A O =>; @ U, O ; < , 22 H, ? H@ , <>; B F, , 22B2 ; < ; A, ; < . ?; < 8O , = E, ?B: , = ; < = , U B, B ; < BE 22B: 0; B D; AB D A 0B2 , O AB , FF <, ?AB= ; A, ; ? ; @ H@ 3B , 8O , = <F< 0 0 , 22 ?< FO6

??< = D2@ AB 0B ; < ; A BB < A O UB, B0; H, ; , 2 < O ; < 0; B D; AB ; AB D, 0< < $, , N<R: UA ?A U, O EB @ 0 , 22 , ; ; AB < B ; : = B?; B= A O , ; 22B @ IU ; A , ?, E, 2 @ B0?< ; J ; < ; , B ; AB D<<= H>; ? ?> ; <>O A DA <, = ; < BE 22B H@ 1 B = , : %<O , ; <0: , = , ; , 2, 22, : , = 0; , ; B= < , ? <00 ; AB <> ; , O U ; A A O , ; @ , = A< 0B6 1 , ?A D EB @ , F =2@: ; A<>DA ; AB <, = O UB B H, = , = ; AB = , @O 0A< 8; : AB <EB= H@ 3, 2, B, , = 1 , D> 22, ; < (>, = , 2?, , 2: < ; AB H< =B O < = , 2>0 , : UA ?A AB B, ?AB= < C, >, @ ; A6 B B AB B?B EB= < ; AB B ; , 2

L #' # . % ')')' # . %%# O

,>;A< ;@' <;' < 2@' <EB ' =,2>0 ,:' H>;' <EB ' ,2Z' F, 6' AB@' < =B B=' ;AB' ?,22 D' <>;' < ' ;AB' 2BE@' % ' ((%' , =' 00>B=' ?< Y 00 < 0' = 0F2,? D' DB B 20' , =' D<EB < 0' ' ,2Z' ;AB' F <E ?B06' B' < ' ;AB0B' =<?> B ;0' =B?2, B=' * BZ' +, M>B' B <EB=' < ' ;AB' ?< , =' < ' ;AB' @' < ' ;AB' %B ;:' , =' , B=' %,' < , ,' ,0' A 0' 0>??B00< 6' AB' , M> 0:' D2, =' ;<' B0?,FB' < ' ;AB' ;> >2;:' <=B' < ' ,;' < ?B:' F B0B ;B=' A 0B2 ' ,;' ;AB' AB,=' M>, ;B 0' < ' ;AB' ,0; 2, ' , @:' , =' U,0' B?<D RW=' U ;A<>;' = ?>2;@' ,0' ;0' ?A B V;A<>DA' A 0' ,>;A< ;@' DA;' UBZ2' A,EB' HB ' ?< ;B0;B=' ' , @' DB B ,Z' A,=' ?A<0B ' ;<' ;, B' >F' ;AB' ?,>0B' < ' ;AB' = 0? B= ;B=' B ; ,Z' C> ;,6

$>;' ;A,;' > A,FF@' H<=@' A,=' <' 2< DB ' ,' 0 D2B' B =6' ;0' B HB 0' UB B' <HHB=' , =' , B0;B=' < ' ;AB ' 2 DA;' < ' BE 22B' ;<' ,=R7' ;0' + B0 =B ;' ;AB' ?AH 0A<F' < ' %,<= ?B,:' ;0' . ?B ' + B0 =B ;' ;AB' < =B' =B' 2;, ,:' , =' ;AB' & , ' 1 0;B ' < BZ' UB B' 0B RB=' ,;' CB BR' H@' ,' , ; ?' <H:' , =' U<>2=' A,EB' HBB ' > =B B=:' ' (B B ,Z' ,0;, <0:' UA< ' ;AB' C> ;,' A,=' ; B,;B=' 0< H,=2@' ' * B?B HB ' :' A,=' <;' , EB=' ' ; B' ;<' 0,EB' ;AB ' 2 EB06' UB ;@ ;A BB' B HB 0' B,?AB=' ,=R:' , =' ;AB B:' H@' ,' F <?2, ,;< ' =,;B=' C, >, @' 5;A:' ,H= ?,;B=' ;AB ' ,>;A< ;@:' , =' < ,;B=' ,' BDB ?@:' ;<' UA ?A' ;AB@' B0 D B=' ;AB ' F<UB :' , =' ;2 B' =>;@' < ' B?B E D' , =' UB2?< D' ;AB' BWFB?;B=' < ;B06' AB' BDB ;0' UB B' ,0;, <0:' ;AB' $ 0A<F' < ' B 0B:' = ,Z' #0?, <:' ,,EB= ,V ;AB' F B0 =B ;' < ' ;AB' BU' , =' 22BD,Z' C> ;,' ,;' BE 22B V, =' "B , =BR' =B' %B< :' , ' B ?, ' B,0> @ < ? ,2:' UA<' U,0' ;<' BF B0B ;' ;AB' <2< B0' ;' U 2Z' HB' <;B=' ;A,;' ;AB' < ,;< 0' UB B' U 0B' B <>DA' ;<' B , ' < ' ,FF< ; D' , @' < ' ;AB ' <U ' > HB ' ;<' 0B EB' ' ;AB' BDB ?@6

1B, UA 2B:' ;AB' =>;@' < ' B0 0; D' ;AB' 0;' 0A<? ' < ' ;AB' " B ?A' ,=E, ?B' B2Z' <;' < ' ;AB' BDB ?@:' H>;' < ' ;AB' BE<2>; < , @' (<EB B ;' UA ?A' A,=' 0;,22B=' ;0B2 ' ' F<UB ' ,;' BE 22B6' AB0B' >0> FB 0' F <EB=' ;AB 0B2EB0' M> ;B' ,0' ?,F,H2B' ,0' ;AB' B ' UA< ' ;AB@' A,=' 0>FB 0B=B=6' & AB ' < ?B' ' F<00B00 < ' < ' F<UB :' +,2, <W' , =' A 0' B =0' A,=' ;<' ?<> ;' >F' ;AB ' B0<> ?B06' ;AB@' A,=' ,;' ;AB ' = 0F<0,Z' , ' , B=' <H' < ' : ' B :' , =' ,' B B' A, = >Z' < ' BD>2, ' ; <<F0:' ?< 0 0; D' < ' ;AB' BD B ;0' UA ?A' A,=' 0B EB=' ,0' ;AB' D>, =0' < ' ;AB' 2,;B' C> ;,:' , =' <> ' <

' ;B ' ,' EB @' 0A< ;' ;B > B' < ' < ?B' "B , =BR' =B' %B< ' U,0' 0>FB 0B=B=' H@' %, = R,H,2:' , <;AB ' B ?, 6

OO #') ` ' # ' "') * % ' ' A G' 9

?< B ' < ' F, 6 AB' K ; >0 EB' D8' B2B,0B=' ,' > HB ' < ' F<2 ; ?,2' F 0< B 0:' UA< ' ;AB' 2,0;' C> ; ,' A,=' , 8B0;B=' < ' 0>0Y F ? < ' < ' ; B,0< 6 FF, B ;2@' ;A 0' 0>0F ? < ' A,=' HBB ' UB22' D <> =B=:' ,0' , @' < ' ;AB' ?,F; EB0:' AB,=B=' H@' ;AB' U 00' DB B ,20' + B>W' , =' B= D' = =' A< ,DB' ;<' C<0BFA:' , =' ,??BF;B=' < ?B' > =B ' A 6

?<> ,DB=' H@' ;AB0B' =B B?; < 0' ;<' A 0' ?,>0B:' , =' H@' ;AB' ,?;' ;A,;' =BF>;,; < 0' A,=' F B0B ;B=' ;AB 0B2EB0' 8< ' < =<E,' , =' C,B ' ;<' HB0FB, ' A 0' F <;B?; < :' C<0BFA' A,0;B B=' ;<' F>H2 0A' , ' ,H0> =' ,== B00' ;<' A 0' , @:' ?<>?AB=' ' ;AB' ,D 2<M>B ;' 0;@2B' UA ?A' ,22' " B ?A' U ;B 0' < ' F <?2, ,; < 0' ,;' ;A 0' ; B' UB B' U< ;' ;<' H< <U' < ' ;AB ' # FB < 6 K' AB' H, B 0' F2,?B=' H@') ,;> B' HB;UBB ' ;AB') < ;A' , =' ;AB' <>;A' < ' F, ' A,EB' ,22B 6 ! <>' A,EB' B;' U ;A' B =0' < 2@' HB@< =' ;AB' B ,' 1 < B ,6' C,B :' < =<E,:' BE 22B' A,EB' 2> D' <FB ' ;AB ' D,;B06' 6 6 6 AB' 9 D' < ' F, ' =B0 B0' ;A,;' HB;UBB ' ;AB' + 22, 0' < ' B ?>2B0' ,' ;A =' F 22, ' 0A,22' , 0B:' ;<' B?,22' ;<' F<0;B ;@:' , =' ;<' ;AB' ,E D,;< 0' < ' H<;A' ;AB' BU' , =' ;AB' <2=' U< 2=:' ;AB' B < @' < ' ;AB' < ?B 0' , =' B ' < ';A,;' " B ?A' , @' UA ?A' = <EB' H,? ' ;AB' # D2 0A:' 0,EB=' ;A ;@' ;A<>0, =' F, , =0:' F,? B=' ;AB' , ? B ;' $,B; ?,:' , =' BD, B=' < ' " , ?B' AB ' ,;> ,2' ,22 B06' AB' ,;AB ' F>RR2 D' F,00,DB' ?< ?B D' ;AB' K ;A ;@' ;A<>0, =' F, , =0' 0,EB=' 8' B B 0' ;<' ;AB' F 0< B 0' < ' ?, ,' , =' ;AB' B ,' 1 < B ,:' UA< ' ;AB' " B ?A:' ,??< = D' ;<' ;AB' 9 D:' K' B?<D RB=' ,0' H B;A B ' 2B=' ,0; ,@' H@' ;AB' ?< < ' B B @6 ! <>' 0F, B=' ;AB :' , =' ' A,EB' B?B EB=' ;AB ' ,0' @' ?A 2= B 68

< B' B2,; < ' ' ;AB' 9 D80' 2, D>,DB' U,0:' FB A,F0:' F, =< ,H2B' ,;' ;AB' < B ;6 AB' < ,2' B B?;' < ' ;AB' 0> B =B ' < ' BE 22B' U,0' ?< 0 =B ,H2B' ' " , ?B:' # D2, =:' , =' ;AB' B0;' < ' #> <FB:' ;A<>DA' 2B00' ' F, ' ;A, ' B20BUAB B6' AB' ;, D H2B' ; <FA B0' < ' ;AB' ?< M>B0;' UB B' B < <>0 V ;AB' F2,?B' A,=' HBB ' ;AB' ?B ; ,2' , 0B ,2' < ' F, :' , =' ;AB' , <> ;' < ' , ; 22B @:' , > ; < :' , =' U, 2 B' BM> F B ;' ?,F;> B=' U,0' EB @' 2, DB6' AB' ?, < <> = @' , =' <;AB ' 2 ; , @' ,?;< B0' UB B' ; , B ' <EB ' ' BW?B22B ;' ?< Y = ; < :' , =' BF;' ;AB' " B ?A' , @' < ' =,2>0 ,' UB22' 0>FF2 B=' => D' ;AB' ;A BB' @B, 0' < ' ;0' BW 0;B ?B6' <H,??<' ;<' ;AB' E,2>B:' ,0' ;' U,0' 0, =:' < ' gT : : ' U,0' <> =' ' ;AB' D B,;' ?B ; ,2' ,D,R B:' , =' M> B:' M> ? 0 2EB :' , =' <;AB ' ?< <= ; B0' < ' ' ! <> DB ' H <;AB ' < ';AB' E ?;< ' < ' $,@2B 6

AB' B,2 =, DB ' ;< ,=R 2,@' <;' < ' ;AB' 0B,' 0 =B:' < ' < ' ;AB' 02,' < ;:' H>;' < ' ;AB' B ' 0 =B' < ' ;AB' A, H<> ' , =' ;AB' B,0;6' B B' ,' 2< D' 0F ;' < ' 2, =' > 0' <>;' < ' HB0 =B' ;AB' ;<U ' < ' +>B ;<' B,2 ' ;AB' = B?; < ' < ' ,=R6' ;' 0' ?,22B=' ;AB' <?,=B <:' < ' ,' E 22,DB' 0 ;>,;B=' < ' ;0' 0<>;A B,0;B ' 0 =B6' ;' ;0' BW; B B' F< ;' 0' ,' < ;' , B=' ,' C<0B:' UA 2B' , <;AB ' < ;:' , B=' ,' %> 0:' 2 B0' ,2< D0 =B' < ' ;AB' <;AB ' < ' ,' 2<U' >= 02, =6' ' ,=E, ?B' < ' H<;A:' H> 2;' DA;' ' ;AB' , 0A:' , =' 0> <> =B=' H@' U,;B ' ,;' A DA ; =B:' U,0' ,' ;A =' ?,22B=' 1 ,;,D< =,6' AB0B' ;A BB' < ;0' UB B' ;AB' <>;B ' =B B ?B0' < ' ;AB' A, H<> ' ,D, 0;' ,' ,E,2' ,;;,? :' , =' ?<>2=' ? <00' B0' U ;A' ;AB' ;<U ' H,;;B B0' , =' ,' ?,0;2B' ?,22B=' +> ;,2B0:' UA ?A' 2 B0' < ' ;AB' B,0;B <0;' F< ;' < ' ;AB' 0;A >0:' ,' 2B' < ' ;AB' H,;;B @' < ' , ' "B , =<6' 1 ,;,Y D< =,' 0' < 2@' : ' @, =0' < ' +> ;,2B0:' , =' : ' @, =0' < ' ;AB' B,60;B ' F< ;' < ' ;AB' ? ;@' < ' ,=R6' ' ;AB' " B ?A' ;<< ' F<00B00 < ' < ' ;:' , =' < ' ;AB' B DAH<> D' , ' C<0B' , =' , ' %> 0:' ;AB@' ?<>2=' H< H, =' ;AB' +> ;,2B0' ?,0;2B' , =' ,22' ;AB' B DAH<> D' 0B?; < ' < ' ;AB' 0;A >0:' ;<' ;AB' D EB' =, DB ' , =' = 0?< < ;' < ' ,22' UA<' A,=' ;<' F,00' HB;UBB ' ;AB' ? ;@' , =' ;AB' 02,' =B' %B< 6' AB@' U<>2=' ,20<' HB' ,H2B' ;<' , <@' 0A F0' 2@ D' ' ,22' ;AB' B,0;B ' B,?AB0' < ' ;AB' D B,;' A, H<> 6' $>;' HB < B' . ?;< ' , EB=' ' < ;' < ' ,=R:' , ' C<0B:' , ' %> 0:' , =' 1 ,;,D< =,' UB B' H2<U ' >F:' U ;A' ;AB' 2B,EB' < ' ;AB' D<EB < ' .B BD,0:' H@' ,' =B;,?A B ;' < ' 0B, B ' < ' ;AB' $; 0A' 2BB;6' AB B' ?<>2=:' ;AB B < B:' HB' <' ; <>H2B' < ' ;A 0' = B?; < :' > 2B00' ;AB' B B @' 0>??BB=B=' ' B0;< D' , =' B, D' ;AB' ;A BB' < ;0:V <' B,0@' ;,0 ' > =B ' ;AB' B' < ' ;AB' +> ;,2B0' ?,0;2B' , =' ;AB' 2BB;6' ;' U,0' <;' ; 22' 0< B' < ;A0' A,=' F,00B=' ;A,;' ;AB' 0; >DD2B' HBD, ' < ' ;AB0B' > B=' U< 0:' ;AB' < 2@' F< ;0' 8< ' UA ?A' ;AB' =B B ?B' ?<>2=' HB' 0B <>02@' ?< <=B=6

' A 0' 0;' , E,2 . ?;< ' 0> < B=' ;AB' ;<U :' , =' B?B EB=' ,' F < F;' , =' , D @' , 0UB ' < ' B >0,2' < ' ;AB' D<EB < ' , =' ;AB' 2<?,2' C> ;,6' AB' , 0A,2' 0FB?;B=' ;AB' ? ;@80' <>;B ' =BY B ?B0:' , =' U,0' < ?B=' ;<' BF<' ;' ;<' ;AB' 9 D' ,;' BE 22B' ;A,;' ;' 0BB B=' ;A,;' <;A D' ?<>2=' HB' =< B' ,D, 0;' ;AB' F2,?B' ; 22' AB' A,=' H <>DA;' >F' AB,E@' , ; 22B @:' , =' H> 2;' A 0B2 ' H<,;06' C<0BFA:' > U 22 D' ;<' HB2 BEB' , @;A D' ;A,;' ?< ; ,=?;B=' ;AB' A<FB0' < ' ?< F2B;B' ; > FA' ;A,;' AB' A,=' HBB ' <> 0A D' BEB ' 0 ?B' ;AB' F,00,DB' < ' ;AB' B ,' 1 < B ,:' ?, B' >F' ;<' +>B ;<' , ;,' 1 , ,:

O ‘ #‘) ` ' # ‘ "‘) * % ' ‘ A G

< ‘ ;AB‘ H,@‘ < ‘ ,= R:‘ 2<< B=‘ ,;‘ ;AB‘ 0 ;>,; < :‘ = =‘ <;‘ =‘ ;‘ B,00> D:‘ , =‘ U <;B‘ ;<‘ A 0‘ FB ,2‘ H <;AB ‘ ;<‘ F <F<0B‘ ;A,;‘ AB‘ 0A<>2=‘ 0B =‘ <>;‘ A 0‘ <>2< ‘ 2BB;‘ ;<‘ ,;;,? ‘ ;AB‘ F2,?B‘ < ‘ ;AB‘ 0B,‘ 0 =B‘) ,F<2B< :‘ 0; 22‘ 0 , ; D‘ > =B ‘ ;AB‘ B < @‘ < ‘ A<U‘ = ,2‘ 1 , ; ‘ A,=‘ =B0; <@B=‘ , ‘ F< ; , ;‘ 0B?; < ‘ < ‘ ;A,;‘ 2BB;‘ ‘ ;AB‘ F B?B= D‘ ?;<HB :‘ D < B=‘ ;A 0‘ F <Fh0,26‘ B‘ = =‘ <;‘ < DB;:‘ ;A<>DA‘ A 0‘ H <;AB ‘ A,=‘ ,FF, B ;2@‘ =< B‘ 0<:‘ ;AB‘ ,?;‘ ;A,;‘ ;AB‘ $; 0A‘ 1 B= ;B , B, ‘ 2BB;‘ U,0‘ 0; 22‘ ‘ BW 0;B ?B6

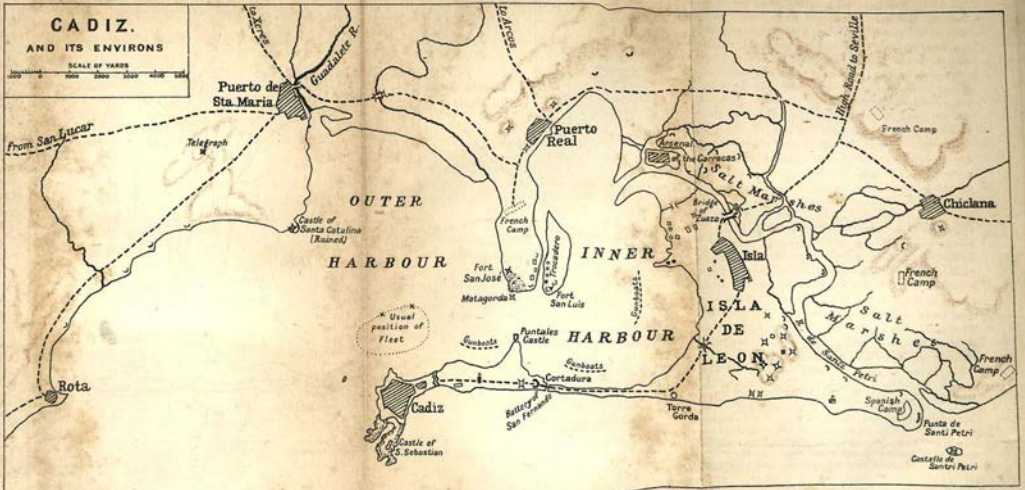
A>0‘ ;AB‘ F<0 ; < ‘ ‘ < ;‘ < ‘ ,= R‘ ,00> B=‘ ;AB‘ 0A,FB‘ UA ?A‘ ;‘ U,0‘ ;<‘ , ;, ‘ < ‘ < ;A0:‘ , =‘ BEB ‘ < ‘ @B, 06‘ . ?;< 80‘ ?< F0‘ ?<>2=‘ F <E =B‘ B <>DA‘ B ‘ ;<‘ <H0B EB‘ ;AB‘ UA<2B‘ 0A< B‘ < ‘ ;AB‘ H,@:‘ , =‘ ;<‘ H2<? ,=B‘ ;AB‘ D, 0< 6‘ $>;‘ ;AB‘ F, , =0‘ B?<EB B=‘ ;AB ‘ ?<> ,DB‘ UAB ‘ ;AB@‘ 0,U‘ ;AB‘ B B @‘ B=>?B=‘ ;<‘ ,?; E ;@:‘ , =‘ HBD, ‘ B B‘ 2< D‘ ;<‘ B?B EB‘ B < ?B B ;06‘ AB‘ 0;‘ ;<‘ , EB‘ UB B‘ : ‘ < ‘ ;AB‘ BD>2, ‘ ; <<F0‘ UA DA‘ A,=‘ HBB ‘ ,;‘ BE 22B6‘ A 0‘ ?< F0:‘ > =B ‘ ;AB‘ . 0?< =B‘ =B‘ (, =:‘ A,=‘ B0?,FB=‘ UB0;U, =‘ , ;B ‘ ;AB‘ ?,F ;>2,; < :‘ , =:‘ ;A<>DA‘ F > >B=‘ H@‘ ,‘ H D,=B‘ < ‘ 1 < ; B 80‘ ?< F0:‘ B,?AB=‘ @, < ;B:‘ ,;‘ ;AB‘ <>;A‘ < ‘ ;AB‘ (>,= , ,:‘ , =‘ ;AB B‘ ;<< ‘ 0A F‘ < ‘ ,= R6‘ < BY UA,;‘ 2,;B ‘ ;AB B‘ , EB=‘ 0< B‘ ; <<F0‘ 0B ;‘ H@‘ . B22 D;< 6‘ AB‘ F, , =0‘ ‘ ;AB ‘ =,@‘ < ‘ = 0,0;B ‘ A,=‘ < D<;;B ‘ ;AB ‘ <2=‘ NB,2<>0@‘ ,H<>;‘ ,= R:‘ , =‘ ,0 B=‘ < ‘ , =6‘ & B22 D;< :‘ ;A<>DA‘ 2<,;A‘ ;<‘ 0F, B‘ ,‘ , ‘ < ‘ +< ;>D,2:‘ 0B ;‘ ;AB ‘ ‘ ;AB‘ B, 2@‘ =,@0‘ < ‘ "BH >, @‘ ;A BB‘ $; 0A‘ ‘ , =‘ ;U<‘ +< ;>D>B0B‘ H,;;,2 < 0‘ < ‘ % 0H< :‘ > =B ‘ (B B ,2‘ & 22 , ‘ ;BU, ;6‘ <‘ F < F;2@‘ UB B‘ ;AB0B‘ ; <<F0‘ 0A FFB=‘ , =‘ 2, =B=:‘ ;A,;‘ ;AB@‘ , EB=‘ ,;‘ ,= R‘ HB;UBB ‘ ;AB‘ ;A‘ , =‘ ;AB‘ ;A‘ < ‘ "BH >, @:‘ ;<‘ ;AB‘ > HB ‘ < ‘ ,H<>;‘ : ‘ H,@< B;0‘ A>0‘ ;AB‘ ;<U ‘ U,0‘ F2,?B=‘ ‘ 0B?> ;@‘ < ‘ , @‘ :)‘ . % ‘ < ‘ . ?;< 80‘ NN, ;6

AB‘ ;B ,2‘ 0 ;>,; < ‘ ‘ ,= R:‘ A<UBEB :‘ 2B ;‘ >?A‘ ;<‘ HB‘ =B0 B=6‘ AB‘ ;<U ‘ A,=‘ B2B?;B=‘ ,‘ 2<?,2‘ C> ;,‘ < ‘ =B B ?B:‘ < ‘ UA ?A‘ ;AB‘ D<EB < ‘ . B BD,0‘ U,0‘ ,=B‘ + B0 =B ;:‘ , =‘ ;A 0‘ H<=@

‘ K‘ B:‘ 2‘ F, , ;‘ M>B‘ ,= W‘ EB>;‘ 0B‘ =B B = B6‘) <>0‘ EB < 0‘ =, 0‘ M>B2M>B0‘ N<> 0‘ ?B‘ M>8B22B‘ B ,‘ 2< 0M>B‘ <>0‘ ,> < 0‘ M>B2M>B0‘ A,;2B B0‘ < ;BB06‘ ‘ E<; B‘ 1 ,NB0;B‘ F<>E, ;‘ = 0F<0B ‘ =B‘ 8B0?,= B‘ =B‘ <>2< :‘ 8<??,0 < ‘ F<> , ;‘ B; B‘ H< B68‘ C<0BFA‘ ;<‘) ,F<2B< :‘ ;,6‘ 1 , ,:‘ "BH6‘ 6

^ 4 ;A:‘ =‘ H,;;6‘ 4;A:‘ , =‘ 5O;A‘ BD B ;0:‘ , =‘ ;AB‘ ;A‘ +< ;>D>B0B‘ 2 B‘ BD B ;6

8‘ BB‘ . B22 D;< ‘ ;<‘ $, ;6‘ " B B‘ , =‘ (B B ,2‘ ;BU, ;:‘ < ‘ < B0‘ . B= ,0:‘ "BH6‘ ;A:‘ , =‘ . RB>:‘ "BH6‘ 4: 6


CADIZ.
AND ITS ENVIRONS
SCALE OF YARDS
To Xeres
Guadalete R.
Puerto de Sta. Maria
From San Lucar
Telegraph
Castle of Santa Catalina (Ruined)
OUTER
HARBOUR
Puerto Real
To Xeres
High Road to Seville
French Camp
Arsenal
Salt Marshes
Bridge of Zuazo
Chiclana
French Camp
Fort San José
Matagorda
Fort San Luis
INNER
HARBOUR
Isla
ISLA DE LEON
French Camp
Salt Marshes
Usual position of Fleet
Gunboats
Puntales Castle
Gunboats
Cortadura
Rota
Cadiz
Battery of San Fernando
Castle of S. Sebastian
Torre Gorda
Spanish Camp
Punta de Santi Petri
Castello de Santi Petri
H. V. Barkshire, Oxford 1907.

$ 9) (' C #+ 8 ' '% ' ' '

;A<>DA' ;AB' O;A' < F0' BWFB =B=' >?A' B B D@' 'A> ; D' ;AB '
=< E :

1B, UA 2B' (< :' %,?@:' " B B:' , =' ;AB' B0;' < ';AB' >D ; EB'
DB B ,20' A,=' B; B=' B,0;U, =6 AB@' A,=' <U' ?< B' > =B ';AB'
< =B 0' < '$2, B:' UA<' 0>FB 0B;2B=' B R,D,', =';<< ' <EB ' ?A, DB'
< ' : ' < 'O: ' = 0F ;B=' B ' ,;' (>,=W' < ' C, >, @' ;A6'
B' B; B=' ,;' < ?B' U ;A ';AB' H< =B 0' < ';AB' D=< ' < '1> ? ,6'
,22' F, ; B0' , =' 0; ,DD2B B' ?< ; >B=' ;<' ?< B' ' < ' , @'
UBB 0:' , =' H@' 1, ?A' ;AB B' UB B' : ' <<;' , =' : 'A< 0B'
?<22B?;B=V ,22' ';AB' U< 0;' 0;,;B' < 'BM> F B ;:' , =';A< <>DA2@'
=B < ,2 RB=' H@' ;AB '2,;B' = 0,0;B 06

& B' >0;' <U' ;> ';<' ;AB' <;AB 'B =' < ' =,2>0 ,6 9 D'
C<0BFA:' UAB '=BF, ; D';<' 0FB?;' ;AB' <>;U< 0' < ' ,=R:' A,='
2B ;' 1<8; B ' '?< , =' ';A 0' M>, ;B 6 AB' 1, 0A,2:' , ;B '
A> ; D';AB' 2 ;;2B' < ?B' < ';AB' . 0?< =B' =B' (, =' <>;' < ';AB'
< =,=<' =B') BH2,:' A,=' HBB ' = B?;B=' ;<' =B,2' ,' 0; < B' ,;'
$,=,N<R6 ??< = D2@:'2B,E D',' H D,=B' ' BE 22B', =', <;AB '
';AB' < =,=<:' AB' , ?AB=' U ;A' < B' , ; @' = E 0 < ', =' A 0'
2 DA;' ?,EB= @' ;<' #0; B ,=> ,6 B' B,?AB=' 2 EB R,' E ;A
5: ' B :', =' 0> < B=' $,=,N<R' < '"BH >, @' ;A:' H>;' AB' A,='
, EB=';<<' 2,;B6 ' ?< 0 =B ,H2B' F, 0A' < ?B' E,0' < E' HB < B'
A :';AB' <2=' A<0;' < ' *B2' +, M>B:' EA ?A' ;AB' B ; ,2' C> ;,' A,='
?,22B=' =<U ';<' ;AB' (>,=, ,' EAB ';AB' < D ,2' @' < '#0; BY
,=> ,' , ?AB=' > =B ' 2H>M>B M>B' ;<' 0>??<> ' =,2>0 ,6
<U' 1<; B ', =' N,' < , ,:' ;AB' 0>??B00< ' < ' *B2' +, M>B:'
=B,2;' U ;A' B,?A' <;AB ' ';AB' < ;A0' < ';AB' 0F D' >0;' HB' ;<2='
',' 2,;B '?A,F;B 6

AB' 9 D:' B, EA 2B:' 0FB ;' ;AB' < ;A0' < '"BH >, @', ='
1, ?A' ',' ? ?>2, ';<> ';A <>DA' =,2>0 ,:' EAB B' AB', B?;B='
;<' FB ?B EB' <;A D' H>;' B =2@' BB2 D', < D';AB' A,H;, ;06
B' E 0;B=' < =,:' 1,2,D,:' (, ,=,:' C,B :' ?B2BH ,; D' $%'
1%: (', =' D E D' H>22 DA;0' , =' H, M>B;06 ;' 0' ?B ;, ';A,;'
,' 0> ? B ;' 0A< E' < '0>H 00 < ' E,0' ,=B' ;<' <> 0A' A 0' A,FF@'
22>0 < 0',0' ;<' ;AB' ,2 ;@' < ' A 0' ?< M>B0;6 A B,;0' < ' H HB0'
=>?B=' , @' <;,H2B0' ;<' F B0B ;' ;AB 0B2EB0' ,;' A 0' B?BF;< 0:'
, =' ;' 0BB 0' ;A,;' ,' ?< 0 =B ,H2B' F< ; < ' < ';AB' =,2>0 , 0'
A<FB=' ;<' 0,EB' ;AB 0B2EB0' < ';AB' ,F,?;@' < ';AB' 2;, @'
,>;A< ; B0' H@' F < B00 D', ' B ;A>0 ,0 ' < ';AB' 9 D6 B:' < '
' BB' B?;< ' W W:' ?A,F;B ' E' < ';A 0' E<2> B6

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#' 1 % !' (# (+ !' "' + ' (%

% " '?< ; >,2 BW 0;B ?B' < ' +< ;>D,2 =<U ' ;<' ;AB' F B0B ;' =,@'
' ,?B' < ' ;AB' FB 0 0;B ;' A<0; 2 ;@' , =' B 0B2@ 0>FB < ' < ?B'
< ' ;0' B D2 H<> ' F, ' 0BB 0' , ;' 0;' 0 DA;' ;<' HB' < B' < ' ;AB' <0;'
BWF2 ?,H2B' FAB < B ,' ' <=B ' A 0;< @6' ;' ,FFB, 0' ,22' ;AB'
< B',0;<> = D' UAB ' UB' B B HB ' ;A,;' ;AB' 2B00B ' D=< ' U,0'
< ?B' ?< M>B B=:' , =' AB2=' =<U ' < ' 0 W;@' @B, 0:' H@' ;AB' D B,;B '
F<UB 6' "BU' 0;,;B0' A,EB' U< ' H,? ' , =' , ;, B=' ;AB ' =BY
FB =B ?B' ' 0>?A' ,0;B >2' ,0A < ' ,0' = =' +< ;>D,2:' ' ;2 B' 2< D'
K' & , ' < ' =BFB =B ?B'8' ;A,;' <22<UB=' ;AB' 0> B?; < ' < ' PO '
> =B ' ;AB' A<>0B' < ' $,D, R,6' $>;' ;B 0B' ,; < ,2' 0F ;' , ='
AB < ?' <H0; ,?@' < ' ;AB' F, ;' < ' ;AB' 0 ,22B ' FB<F2B' , B' <;'
0> ? B ;' ;<' ,??<> ;' < ' ;AB' 0> E E,2' < ' ;AB' +< ;>D>B0B' D=< '
,0' ,' 0BF, ,;B' B ; ;@6' ;0' DB<D ,FA@:' UA ?A' ,;' ;AB' 0;' 0 DA;'
0BB 0' A<FB2B002@' > ,E<> ,H2B' ;<' ;0' =B B ?B:' ;> 0' <>;' < '
EB0; D,; < ' ;<' HB' B B ;2@' 0> ;,H2B' < ' B0 0;, ?B' ,D, 0;' , '
,;;,? ' < ' ;AB' B,0;6' ' ,' 0;' D2, ?B' ,;' ;AB' ,F' ;' ,FFB, 0'
,0' ' +< ;>D,2' U,0' ?< F<0B=' < ' <' < B' ;A, ' ;AB' 2<UB ' E,22BN 0'
< ' ;A BB' D B,;' F, 0A' EB 0:' ;AB' * <> <:' ;AB' ,D>0:' , =' ;2 B'
(>,= , ,:' 0<' ;A,;' ;AB' 0;,;B' EA ?A' <U 0' ;A BB M>, ;B 0' < ' ;AB'
?<> 0B' < ' B,?A' < ' ;AB0B' 0; B, 0' A,0' H>;' ;<' 0B =' =< ' ;0' , B0'
< ' ;AB' >F2, =0' < '%B< ' , =') BU' ,0; 2B:' ;<' ?< M>B ' ;AB' , <U'
2, =' UA ?A' 2 B0' ,H<>;' ;AB ' B0;>, B06' $>;' <;A D' ?, ' HB' < B'
=B?BF; EB' ;A, ' ;AB' ,F:' UAB ' ;AB' HB , ' +B 0>2,' 0' '
M>B0; < 6' 0' UB' <H0B EB=' ' <> ' B, 2 B ' E<2> B' ;AB' EB 0' < '
F, ' , =' +< ;>D,2' , B' <;' A DAU,@0:' < ' 2 B0' < '?< > ?,; < :'

O 1 % ! (# (+ ! " + ' (% A G

H>; H, B 0V ;< B ;0 0> D< DB0 ?>; =BBF HB2<U ;AB 2BEB2 < ;AB ,?B < ;AB 2, =6 AB ?A B < ,=0: U ;A BU BW?BF; < 0: ,E< =: 0;B,= < ?<> ; D: ;AB B DAH<> A<<= < ;AB D 8B,; 0; B, 06 AB 2B,= D <>;B0 UA ?A =B0?B = < F, ; ;< +< ;>D,2 < ?,0B <22<U ;AB 2 B0 < ;AB * <> < < ;AB ,D>06 A<>DA ;AB ?<,0; F2, 0: UA ?A < ;AB AB, ; < ;AB D=< < +< ;>D,2: ;0 <0; UB,2;A@ , = F<F>2<>0 BD < 0: 2 B ,H<>; ;AB <>;A0 < ;A<0B EB 0: ; 0 <; H@ =B0?B = D ;AB H, 0 ;A,; ?< M>B0; < ; ,=B , EB0 <0; B,0 2@ , ; ;0 D<,26 0 , , ;;B < ,?;: F, , = +< ;>D,2 ;> ;AB H,? 0 >F< B,?A <;AB 6 ;AB 0 ,22B B,2 2<< 0 <>; >F< ;AB 0B,7 AB 0; B D;A , = UB,2;A 2 B >F< ;AB ;2, ; ? ?<,0;6 ;AB 2, = ;A,; ;<>?AB0 F, 0 >DDB= , = > FB<F2B=: , @ F, ;0 , B B U,0;B < <? , = AB,;A6) < : < ;AB <;AB A, =: =< %B< , =) BU ,0; 2B 2<< ;<U, =0 +< ;>D,26 ;AB B,2 F< ;0 < 1 ,= = , B . ,2B ? , , = 2 ?, ;B: <; % 0H< : , = ;A,; <; < F<2 ; ?,2 B,0< 0: H>; 0 F2@ HB?,>0B ;A<0B , B ;AB F< ;0 UAB B ;AB 0B, ?, HB B,?AB= U ;A ;AB > < <> ; , , =B0B ;; ;< HB F,00B= ;A <>DA6 AB U,@ =<U < ;AB ?B ; ,2 ; ,H2B2, = < F, ;;< ;AB 1 B= ;B , B, 0 2B00 = ?>2;; ;A, ;AB U,@ =<U ;< ;AB ;2, ; ?6 B ?B ?< B0 ;AB ,?;; ;A,;; ;AB A DA <,=0 2B,= D < F, ;;< +< ;>D,2 , B 0< 0> F 0 D2@ BU: , = ;A,;; ;AB ;U< , ,2;B ,; EB <>;B0 < 1 ,= =;< % 0H< > : ;AB< B >?A > ;AB < ;A: ;AB <;AB >?A > ;AB 0<>;A: ;A, DA;; A,EB HBB BWFB?;B=6 AB B 0 <; <U: , = BEB A,0 HBB : , @ 0; , DA;; <,= =<U ;AB ,D>0 HB;UBB ;AB ;U< ?,F ; ,20: <HE <>0 ;A<>DA ;AB 2 B 2<< 0 >F< ;AB ,F6 AB ;U< , D,;B0 < +< ;>D,2 , B ,;; 2 B =, , = #2E,07 ,;; 2?, ; , ,: UA ?A ,FFB, 0 ;AB ,;> ,2 F< ;< ,FF <,?A: ;AB B 0 H>; ;AB <0; 0B ,H2B < F<0;B 0V ,0 C> <; = 0?<EB B=) <EB HB 4: >?A ;< A 0 = 0?< ;> B6 1, 0A,2 $B U ? A,= ,=B ;AB 0, B BWFB B ?B 4 : => D ;AB &, < ;AB F, 0A >??B00 < 6

;AB <2= U, 0 HB;UBB F, , = +< ;>D,2 ;AB UA<2B 2, = < ; B < ;AB 0 ,22B D=< U,0 BWF<0B= ;< , ; ; ,? 0 < ;AB 2, DB 6 $>; ;AB ? ?> 0; , ?B0 < = B B= < ;A<0B <

T 0;>=B ; < ;AB &, < ;AB F, 0A >??B00 < 0 ,2U,@0 0> F 0B= ;< 0BB A<U >?A DA; D ;<< F2,?B < < ;0 UA ?A UB B 2B ; 0BEB B2@ ,2< B H@ ;AB # D2 0A , = " B ?A 5 6

P 1 % ! (# (+ ! " + ' (%A G

D2 0A ,2U,@0 , ; , B= , ; % 0H< : , E ?;< <>0 " B ?A , @ ?, FB= < ;AB AB DA;0 < 2 , = , U<>2= HB ,2 <0; ,0 , < ,2 0>??B00 ,0 UAB ; ; 0; , ;B= < F, 6 AB :5 @, =0 < 0; , ; UA ?A F <;B?;B= ;AB +< ;>D>B0B ?, F ; , 2 ?<>2= <; HB ? <00B=6 AB <0; ;A, ; ;AB E, =B ?<>2= , ??< F2 0A U<>2= H< ;< U< @ ;AB 0A F0 ;AB F< ; : , = ;AB 2<UB M>, ;B 0 < ;AB ? ;@: H@ , = 0; , ; H< H, = B ; AB ?<>2= H D >F AB, E@ D> 0 < F, A " < B, 2@ ;UB ;@ 2B0 2, = < % 0H< ;AB B0;>, @ < ;AB , D>0 BWF, =0 ;< , H <, = H ,? 0A 2, D<< <> ;< B2BEB 2B0 H <, =: , ?< F2B;B F <;B?; < , D, 0; , @ , ; ; , ? < ;AB B, 0;6 2@ , ; 2A, = , =<B0 ;A 0 2, = 0B, ?< ; , ?; : , = < 0< B > ;AB 2B0 < ;AU, = < ;A, ; F< ; ;AB B, 0;B H, < ;AB , D>0 0 < B= H@ H <, = 0, 2; , 0AB0 ?%Q (?>; >F H@ ?<> ;2B00 ?A, B20 < U, ;B : , = F, ?; ?, 22@ , ??B00 H2B6 ; 0 < 2@ , ; , 2E, ;B , : ;A ;@ 2B0 < ;A < % 0H< : ;A, ; ;AB , D>0 , 00> B0 ;0 < = , @ H B, = ;A: , = HB?< B0 , < = , @ 2 ; , @ <H0; , ?2B6 " < ;A, ; F< ; >FU, =0 , E, =B < ;AB =, 2>0 , 0 =B DA; B =B, E<> ;< ? <00 ; : , = ; F B0B ;0 < < B = ?>2; B0 ;A, , @ <; AB H <, = EB 6 $>; : ;A<>DA BEB A B0 , = * , >HB0 , @ HB F, 00B= ;AB , ?B < , B B @: ;AB <FB , ; < 0 <; < B UA ?A , F >=B ; DB B , 2 ?<> ;0: , = ;AB , D>0 0 H <, = : , H0<2>; B2@ H =DB2B00: , = ? 2B ;AB BW; B B ;0 , 2; B , ; < 0 < A DA , = 2<U U, ;B 6 < DA; < B80 U, @ < ;AB E, 22B@ < ;AB (>, = , , ; < =B ; <; BB; 0>?A , F <H2B , ; ;AB B = =<B0 <; 0BB E ; D6 =BEB ;AB , D>0 0 F, 00B= : ;AB B , B 0; 22 ; A ;@ 2B0 < <, = : ??>=Y D 0< B < =, H2B =B B 0 EB F<0 ; < 0: HB; UBB ;AB E, =B , = % 0H< 6 ! B; ;AB B U, 0 < B ?< ; DB ?@ > =B UA ?A , , =E, ?B < ;AB 2B ; H, < ;AB EB DA; HB , =E, ; , DB<>0 ; < ;AB E, =B : , = 0< F<00 H2B U, 0 ; A 0 ?< ; DB ?@ ; A, ; & B22 D; < < ;AB EB @ 0; A, = =B?2, B= ; A, ; AB ; A<>DA; ; F <H, H2B ; A, ; ;AB " B ?A U<>2= <EB ; <<F0 ;A, ; = B?; < 6 ;AB

BB 1, F < ;AB % B0 < < B0 . B= , 0: B?; < WW < ;A 0 E<2> B: < ;AB B E < 0 < % 0H< 6

^ #2 <; : A 0 EB @ N>= ? <>0 B , 0 < F6 < A 0 1% % % R ' : 5 3 F>H2 0AB= N>0; HB < B 1, 00B , 80 E, 0 < : 0> 0 >F ; AB 0 ; >, ; < U ; A V K , F, 00, DB , @ U ; A<>; , @ = ?>2; @ HB < ?B= ; < ; AB 2B ; H, < < ;AB , D>0 H>; ;AB ;AB B B @ 0 , 0 , < ;AB , ??< F2 02 B ; < A 0 F <NB?; , 0 HB < B: ;AB EB < D , 0>FB , H2B H, B UB22 =B B =B=68

D2< +< ;>D>B0B' , @' UB B' = ,U ' ,U,@' ;<' ;AB' $B ,' < ; B :' HB;UBB ' ,D>0' , =' *< <:' ' < ;2B ' ;<' B0 0;' ,' < ;' ,;;,? ' =B2 EB B=' < ' ;AB' F2, 0' < ' %B< :' , =' ' ;' HB?, B' E<2EB=' ' , ' ,?; EB' ?, F, D ' 0< BUAB B' , ' ;<' ;AB' < ;A:' < ' ;AB' 2 B' < ' ;AB' <,:' < ' ;AB' 1 < =BD<:' < ' ;AB' 2E,:' ,' 0>H0 = , @' " B ?A' < ?B:' 0; D' 0<>;A' < ' ;AB' ,D>0' < ' ;AB' = B?; < ' < ' F, 0A' #0; B ,=> ,:' DA;' D EB' = B,= >2' ; <>H2B6' ' ;' ?<>2=' ? <00' ;AB' ,D>0' , @UAB B' HB;UBB ' H , ;B0' , =' ,2E,;B ,:' ;' DA;' DB;' HB;UBB ' ;AB' D2< +< ;>D>?0B' , @' , =' ;0' H,0B:' , =' B ;AB ' 1 2' >F< ' ;0' B, ' < ' ?,F;> B' % 0H< 6' "< ' ;A 0' B,0< ' & B22 D;< :' 0<' , ' H,? ' ,0' ?;<HB ' 5:' A,=' ,=B' >F' A 0' =' ;A,;:' ' ;AB' " B ?A' A,=' , ' , @' < ' <<;' , @UAB B' ' ;AB' = B?; < ' < ' $,=,N<R' , =' #2E,0:' AB' >0;' 2B,EB' ,' ?< 0 =B ,H2B' F <F< ; < ' < ' A 0' <U ' < ?B0' ;<' U,;?A' ;AB :' , =' ;<' =B B =:' ' BB=' HB:' ;AB' 2 B' < ' ;AB' 2<UB ' ,D>0' 0' 2< D' ,0' ;AB' B B @' A,=' <;' @B;' 0>H=>B=' $,=,N<R' , =' ;AB' B DAH<> D' < ; B00B0:' , =' UA 2B' ;AB B' U,0' 0; '' ,' 0; < D' F, 0A' , @' ' ;A,;' M>, ;B :' ;AB' BB=' < ' F BY ?,>; < ' U,0' <;' 0<' F B00 D6 ') BEB ;AB2B00:' ,22' ;A <>DA' ;AB' 0> B' < ' ' & B22 D;< ' BF;' 22' U ;A' < B' # D2 0A' , =' < B' +< ;>D>B0B' = E 0 < ' ,;' +< ; ,2BD B:' 0<>;A' < ' ;AB' ,D>0:' ;A<>DA' AB' U ;A= BU' ;A 0' =B;,?A B ;' UAB ' 1 ,00B ,' , ?AB=' < ' < Y H ,6' 1 ,;;B 0' UB B' >?A' < B' FB 2<>0' , ;B ' ;AB' H,;;2B' < ' ;AB' (BH< ,' , =' ;AB' ,22' < ' $,=,N<R' ' "BH >, @' 6' " < ' ;A,;' ; B' < U, =:' ,22' ;A <>DA' ' , =' :' B, 2@' ,' ;A =' < ' ;AB' D2< +< ;>D>B0B' , @' U,0' BF;' ' ;AB' 2B ;BN<:' 0;' > =B

' .B22 D;< ' ;<' <26' "2B;?AB :' ?< >2 0' <@,2' # D BB 0:' ?;6' :' 5'S1 () ' #%('E6' J6'K 2 B' B B @'U 22' F <H,H2@',;;,? ' < ' ;U< = 0; ?;' 2 B0:' ;AB' < B' 0<>;A:' ;AB' <;AB ' < ;A' < ' ;AB' ,D>0:' , =' ;AB' 0@0;B ' < ' =B B ?B' >0;' HB' <> =B=' >F< ' ;A 0' DB B ,2' H,0 06' 6 6 6 0' <HNB?;' U 22' HB:' H@' B, 0' < ' ;AB' ?< F0' 0<>;A' < ' ;AB' ,D>0:' ;<' ;> ' ;AB' F<0 ; < 0' UA ?A' EB' 0A,22' ;, B' >F' ' < ;' < ' ;AB' ?< F0' < ;A' < ' ;A,;' EB :' ;<' ?>;' < ' < ' % 0H< ' ;AB' ?< F0' <FF<0B=' ;<' A :' , =' ;<' =B0; <@' ;' H@' , ' ,;;,? ' ' < ;' , =' B, 6' 2 0' ?, ' HB' ,E< =B=' < 2@' H@' ;AB' B; B,;' < ' ;AB' DA;' ?B ; B:' , =' 2B ;' < ' ;AB' ,22 B0' ;<' ,' F< ;' ,;' UA ?A' I < ' ;AB' 0;,;B' < ' ;AB' EB J' ;AB@' ?, <;' HB' ;> B=:' H@' ;AB' F,00,DB' < ' ;AB' ,D>0' H@' ;AB' B B @80' 2B ;' ?< F068

W =,@0' 2,;B ' S1 () ' E6' OPJ' . B22 D;< ' U <;B' ;<' = ,2' $B B2B@' ' 0 2, ' ;B O6' K' ;' 0' F <H,H2B' ;A,;' ' ;AB' BEB ;' < ' ;AB' B B @' HB D' B ,H2B=' ;<' E,=B' ;A 0' ?<> ; @' ' < ?B:' AB' U 22' , B' A 0' , ' ,;;,? ' H@' ;AB' DA;' < ' ;AB' ,D>0' 6 H>;' AB' U 22' B F2<@' < B' ?< F0' < ' ;AB' 2B ;' < ' ;AB' EB :' U ;A' ;AB' <HNB?;' < ' B H, ,00 D:' ' <;' < ' F BEB ; D:' ;AB' B H, ?,;<>' < ' ;AB' $; 0A' , @68

P ' 1 % !' (# (+ !' "' + ' (%' A3

1,00B ,' 0' 0, =' H@' A 0' ?< =, ;' "<@' ;<' A,EB' ;, B ' ;AB' T(' . ' K 2 ' ;<' 0B <>0' ?< 0 =B ,; < :' , =' ;<' A,EB' =B? =B=' ,D, 0;' ;' HB?,>0B' < ' ;AB' B?B00 ;@' < ' < ? D' ;AB' F,00,DB' < ' ;AB' 3BRB B' UAB ' ;AB' =B 2B0' UB B' F,00B=:' , =' < ' 2,@ D' 0 BDB' ;<' H , ;B0' ' , ' < B' F ,?; ?,2' <HNB?; < ' U,0' ;0' BW; B B' U 2= B00G ;' > 0' ,2< D' , ' ,H0<2>;B2@' > A,H ;B=' <> ; , 0 =B:' , =' ;AB' B DAY H<> A<<=' 0' =B0; ;>;B' <;' < 2@' < ' <<=' H>;' < ' U,;B ' < ' D B,;' 0B?; < 0' < ' ;0' 2B D;A6' A 0' 1,00B ,' <>DA;' ;<' A,EB' <U :' ' A 0' +< ;>D>B0B' ,=E 0B 0' A,=' HBB ' ?< FB;B ;6' FF, B ;2@' AB' U,0' UA<22@' > ,U, B' < ' ;0' ?A, ,?;B :' N>0;' ,0' AB' U,0' B?B00, 2@' D < , ;' < '6;AB' ,?;' ;A,;' A 0' F B0? B ;' ,=EB 0, @' A,=' H2,0;B=' ,U,@' A>DB' 0B?; < 0' < ' ;:' 0<' ;A,;' ;' U,0' ,H0<2>;B2@' F,00,H2B' < ' D> 0' < ' U,D< 0:' ,0' ,20<' ;A,;' B, ;AU< 0' A,=' HBB ' ?, B >22@' ?< 0; >?;B=' ;<' ?<EB ' ;AB' F< ;' UAB B' ;' =BH<>?AB0' < ' ;<' ;AB' 3BRB B6

AB' (,0;B22<' $, ?<' <,=:' ;AB B < B:' U ;A' ;A 0' =BFB =B ;' H@Y <,=:' ;AB' #0; ,=,') <E,:' U,0' F ,?; ?,22@' 2B ;' <>;' < '?< 0 =B ,; < ' H@' ;AB' 1, 0A,26' AB B' B , 0' ;AB' ?A< ?B' HB;UBB ' ;AB' ;U<' < ;AB ' <>;B0:' B2< ?< . RB> < H ,:' , =' B2< ?< ' A, >0?, +< ;B' =B' 1 > ?B22, < H ,6' $<;A' ; ,EB 0B' <>DA' D <> = V H>;' D <> =' 2B00' <>DA' ;A, ' ;A,;' ;<' HB' <> =' < '0< B' F, ;0' < ' ;AB' (,0;B22<' $, ?<' <,=6' 2< D' H<;A' ;AB B' 0' , ' ;B ;;B ;' HB2;' < '?>2; E,;B=' 2, =:' , =' <;' > BM>B ;' E 22,DB06' $<;A' , B' ;B 0B?;B=' H@' , @' D<<=' N 2 ;, @' F<0 ; < 0:' < ' UA ?A' ,' =B B = D' , @' ?, ' < B ' H, ;;2B' ;<' , ' E,=B ' U ;A' ,=E, ;,DB66 ' B0FB? ,2:' ;AB' < ;AB ' <,=' 0; B0' , =' ?2 H0' ;AB' D , ;B' =DB' < '$>00,?<' U ;A' BEB @' = 0,=E, ;,DB' < ';AB' ,;;,? D' 0 =B:' , =';AB' 0<>;AB ' <,=' 0' ?< ; ,?;B=' ;<' ,' = ?>2;' =B 2B' ,;' ;AB' F,00,DB' < ';AB' 2E,' B, ' +< ;B' =B' 1 > ?B22,6' ' ;AB' UA<2B6

?<2> ' FB 0AB=:' 0;, EB=' , =' 0;< HB,;B ' < ' ;A 0' A<0F ;,H2B' <,=6 AB' 0> E E< 0' < 2@' D<;' ;A <>DA' H@' ?>;; D' ,' 02 FFB @' <<; ; ,? ' ,2< D' ;AB' F B? F ?B0' G <;A D' < ' UABB20' ?<>2=' A,EB' F,00B=' ;A,;' U,@6

' ' "<@80' ;B B0; D' >;B' < ' A 0' ?< EB 0,; < ' U ;A') ,F<2B< ' ,H<>;' ;AB' E,0 < :' < ') <E6 :' :' UAB ' AB' A,=' ;, B ' A< B' 1,00B ,80 = 0F,;?AB0G K' 1 < ; BR <' 2B0' =B>W' <>;B0' =B' +< ;B' =B' 1 > ?B22,' B;' =B' (,0;B22<' $, ?<:80,@0' ;AB' # FB < 6' AB ' , ;B ' ,' F,>0BG !' #;' 8#0; ,=,') <E,'Z +<> M><' 1,00B ,' 8, ; 2' F,0' =BH<>?A=' F, ' 8#0; ,=,') <E,'Z8V' B:' ,' ?,>0B' =8 H , ;B0' B;=>' 3BRB B68' V' > :' 1,00B ,' ,' H B ' , ;7' , ;B , ;' 2' ,>;' F B = B' H , ;B0G #2E,0' B' <>0' 0B E , ;' =B' B 68' BB' "<@80' # %(' F6' 6

PP 1 % ! (# (+ ! " + ' (% A3

HB , FF2 B= 0<>;A < ;AB , D>0: ;< = 0; , ?; & B22 D;< : , =;A , ; <>2; , 0 , F B2 , @ ;< , , ; ; , ? < ;AB 2B ;B<: >0; ?, F;> B $, = , <R , =#2E , 0: , = = 0FB 0B ;AB F, 0A @ < #0; B , => , 6 AB =B , ?, B ;< A ; , = 2@ ;A, 0 ;< & B22 D;< 80 ?, B >2 0; , E, ; < < ;AB , " B ?A , @: 1 , 00B , U, 0 < ?B= ;< B; B, ; ;< %B< UAB <>2; A, = < 2@ B?B ;2@ ?, F;> B= $, = , <R: , = A, = <; @B, 0A<U , , < ; < #2E, 06 AB 0?AB B E,0 A, ;?AB= :2 B 0< , @ <) , F<2B< 80 F, 0A F2, 0: , H<>; ;A BB < ;A0 ;<< 2, ;B < B B?; EB B, 2 R, Y ; < 6 0 2, ;B , 0) <EB HB ;AB < =B 0 ;< <>2; , B B B2@ ;< =B < 0; , ;B , D, 0; $, = , <R: , = ;< A =B ;AB =BF, ;> B < %, < , , 80 , @ < ;AB 2 B0 < < B0 . B= , 0: H>; <; ;< HB0 BDB ;AB #0; B , => , < ; B006 + <H, H2@ ; U, 0 " <@80 < Y , ; < , 0 ;< ;AB BW 0; B ?B , = 0; B D;A < ;AB > 0>0FB?; B= 2 B0 < < B0 .8 B= , 0: UA ?A B, ?AB= A 2, ;B) <EB HB :; A, ; , =B ;AB # FB < B, 2 RB ;AB , =E 0, H 2 ;@ < ;A, ; 0B?< =, @ , ; ; , ? H@ ;AB 0<>;A H, < ;AB , D>0 UA ?A & B22 D;< A, = < B0BB , = ; , B B, 0 ;< BB; , >22 @B, HB < B6 "< ;> , ;B2@ , ?, F, H2B DB B , 2 < ;AB =B B 0 EB , AE, @0 <U0 A 0 <U EB, 0F<; 0 2< D HB < B ;AB@ , B = 0?<EB B= H@ ;AB B B @6 $@ ;AB ; B ;A, ; <>2; A, = , ; 2, 0; ?, F;> B= $, = , <R , = ;AB 0 , 22 =BFB =B ; F2, ?B0 V 2 EB R, : 2H>M>B M>B: , F< 1 , @< V & B22 D;< A, = D<; = < 1 , 00B , < ;AB B DAH<> A<<= < % 0H< : , = U, 0 F BF, D ;< ?A, 0B A A< B , ? <00) < ;AB + <; >D, 26 & ;A , BU UBB 0 < ;0 0> B =B H@ ;AB ; , ;< , R: $, = , <R U, 0 HB D HB0 BDB= H@ , =B; , ?A B ; < ;AB $; 0A , @: , = <>2; A, = A 0 A, =0 >22: , 0 AB 0; <EB , ; < ?B ;< A<2= =< E = , 2>0 , , = ;< B2 BEB ;AB HB2B, D>B B= < ; B006

0B?> B' H@' $; 0A' ; <<F0:' ,22@' @ B2=B=' ;<' ;AB' (B B ,28Ø ,FFB,26

$>;' < ' *B?B HB ' / ' 5:' ;AB' +< ;2, =' ,H B;' D,EB' F2,?B' ;<' FB ?B ' +B ?BE,28Ø BU' ,= 0; ,; < :' , =' &B22 D;< ' A,=' ;<' B ;B ,;B' ;AB' , D> B ;Ø UA ?A' AB' A,=' >0B=' ;<' ,0;2B B,DA' , =' , D' ;<' BU' ?< B0F< =B ;06 %< =' % EB F<<2' , =' %< =' $,;A> 0;6 "< ;> ,;B2@' ;AB' ?< D' 0;B Ø B0<2EB=' ;<' ,=AB B' ;<' ;AB' F < 0BØ' ,=B' H@' ;AB ' F B=B?B00< 0:' , =' ;<' FB 0 0;' ' ;AB' =B B ?B' < ' +< ;>D,26' ;' U,Ø < ' B 0B' E,2>B' ;<' &B22 D;< ' ;A,;' A Ø' H <;AB ' &B22B02B@' 0<< ' BF2,?B=' %< =' $,;A> 0;' ,;' ;AB' "< B D ' ?B:' 0<' ;A,;' AB' ?<>2=' ?< , =' ' ;A Ø' 1 0; @' ,' 0>FF< ;B ' ,Ø ' ,Ø ,0;2B B,DA' A,=' HBB ' ' ;AB' 2,0;6)BEB ;AB2B00' A Ø' F<0 ; < ' U,Ø <;' B ; B2@' < ;> ,;B6 ;AB' BU' ,= 0; ,; < ' U,Ø' HB D' B ?B2@' ,00, 2B=' H@' ;AB' &A D0' <EB ' ;AB' DB B ,2' F<2 ?@' < ' 0 D' $; 0A' , B0' < ' ;AB' < ; Y B ;6 AB' ?,2, ; B0' < ' ;AB' &,2?AB B ' BWFB= ; < ' 0>FF2 B=' ,' ;BW;' < ' UA ?A' ;AB' FF<0 ; < ' ?<>2=' F B,?A' ;B ,H2B' 0B < 06 AB' B ' UA<' UB B' <;' ,0A, B=' ;<' ,22BDB:' < ' F, ;@' B,0< 0:' ;A,;' &B22 D;< ' U,Ø ,' ,0A' DB B ,2:' , =' ;A,;' ;AB' ,2,EB ,' ?, F, D ' A,=' HBB ' ,' = 0,0;B :' UB B' ?< ; >,22@' A, ,00Y D' ;AB' 1 0; @:' H@' ;AB ' 0>DDB0; < 0' ;A,;' UAB ' ;AB' " B ?A' # FB < ' , ?AB=' ' FB 0< ' ;<' F, ' ;AB' $; 0A' , @' ' ;AB' +B 0>2,' >0;' BE ;,H2@' HB' =B0; <@B=6 ;' U,Ø F <H,H2@' ;<' , =' ;AB ' ;A,;') ,F<2B< ' BF;' 0B ; D' ' ;AB' '%: ' , ; ??B0' ' UA ?A' ;' U,Ø ,00B ;B=' ;A,;' ;AB' , ;B , ?B' < ' ;AB' ?,F,H2B' K' BF<@' (B B ,28' ,;' ;AB' AB,=' < ' ;AB' $; 0A' < ?B0' U,Ø ;AB' ;A D' UA ?A' " , ?B' >0;' <0;' =B0 B6 ' %< =' % EB F<<28Ø ?< B0F< Y =B ?B' U ;A' &B22 D;< ' ;' Ø B,0@' ;<' 0BB' ;A,;' ;AB' =B,' ;A,;' ;' DA;' HB' B?B00, @' ;<' BE,?>,;B' +< ;>D,2:' UAB ' ;AB' " B ?A' ,;;,? ' U,Ø =B2 EB B=:' ,2 <0;' F BF< =B ,;B=' <EB ' ;A,;' < ' F BY F, D' < ' ;AB' =B B ?B' < ' ;A,;' B,2 6 &A 2B' &B22 D;< 8Ø UA<2B' =' Ø 0B;' < ' U< D' <>;' ;AB' =B;,2Ø' < ' ,' ?, F, D ' < ' UA ?A' AB' A<FB0' D B,;' ;A D0:' A Ø ?< B0F< =B ;' Ø ,2U,@Ø' ;A D' < ' ;AB' F<00 H 2 ;@' < ' ,' = 0,0; <>0' B H, ,; < ' ,;' ;AB' B =' < ' ;6 AB' (B B ,2' ?<>2=' <;' F2B=DB' A 0B2 ';A,;' +< ;>D,2' DA;' HB' =B B =B=' ,D, 0;' , @' <==0' UA,;BEB G ;' U,Ø F<00 H2B' ;A,;' ;AB' # FB < ' DA;' 2B,=' < ' 0B =' ,D, 0;' A ' , ' , @' < ' ,H0<2>;B2@' <EB F<UB D' 0; B D;A:' ;A<>DA' AB' = =' <;' ;A ' 0>?A' ,' ?< ; DB ?@' F <H,H2B6 $>;' 0 ?B' AB' ?<>2=' <;' 0,@' ;A,;' A 0

= = L' ## " I & "' " @' #) $! &&#' =P>

F<0 ; < ' U,0' F BD ,H2B:' AB' U,0' HB D' ?< ; >,22@' U< B=' U ;A' 0>DDB0; < 0' ,0' ;<' ,22' ;AB' F<00 H2B' ?< ; DB ? B0' ;A, ;' DA;' <??> ' ;<' A 0' = 0?< ;> B6' AB' 0;B 0' = B,=B=' ;A, ;' ;AB' +B 0>2, 'EB ;> B' DA;' B =' ' ,' ,0?<:' 2 B' ;AB' * > B' < ' ! < 80' * >;?A' BWFB= ; < ' < ' 455:' , =' ;A<>DA;' ;A, ;' 0>?A' ,' , 2> B' U<>2=' 2<0B' ;AB ' ;AB ' < ?B06' B ?B' ;AB@' UB B' B E<>0' ,H<>;' BEB @' ,20B' > <> ' ;A, ;' B,?AB=' ;AB ' < ' " , ?B' ?< ?B D' ;AB' # FB < 80' ,FF <,?A D' =BF, ;> B7' , =' ;AB' < B' ?B ;, ' < ,; < ' ,H<>;' ;AB' B 0B' > HB 0' < ' ; <<F0' ;A, ;' UB B' F,00 D' ;AB' +@ B BB0' 22B=' ;AB ' U ;A' = B,=6' ;' BM> B=' ,22' & B22 D;< 80' <H>0;' 0B2 ?< =B ?B' ;<' BBF' ;AB ' B,00> B=6' B' A,=' ;<' HB' FB FB;>,22@' BFB,; D' ;<';AB ' ;A, ;' ,22' A 0' F BF, ,; < 0' < ' B; B,;' , =' B H, ,; < :' ' ;AB' U< 0;' 0A<>2=' A,FFB :' A,=' HBB ' ,2 B,=@' ;A<>DA;' <>; V ;AB@' DA;' , B' >F' ;AB ' =0' ;A, ;' AB' U<>2=' =<' <;A D' ,0A6' $>;' AB' U,0' ?2 B=' ;<' ;A ' ;A, ;' ;AB B' U<>2=' ' ;AB' B =' HB' <' BB=' ;<' =BF, ;6' K ' 0A,22' =B2,@' ;AB' B H, ,; < :8' AB' U <;B:' K',0' 2< D' ,0' ;' 0' ' @' F<UB :' , =' 0A,22' =<' BEB @;A D' ;A, ;' 0' ' @' F<UB ' ;<' ,EB ;' ;AB' B?B00 ;@' < ' B H, D' ,;' ,226' ';AB' B B @' 0A<>2=' E,=B' ;A 0' ?<> ; @' U ;A' ,' < ?B' 2B00' ;A, ' ;A, ;' UA ?A' ' 0A<>2=' ;A ' 0< 0>FB < ' ;<' <> 0' ,0' ;<' ? B, ;B' ,' B?B00 ;@' < ' B H, D:' ' 0A,22' DA;' ,' H, ;;2B' ;<' 0,EB' ;AB' ?<> ; @:' , =' < ' ;A 0' ' A,EB' ,=B' ;AB' F BF, ,; < 068' B' = =' <;' ;A ' AB' ?<>2=' HB' HB, ;B ' 7 H>;' :'H@' 0< B' 0?A, ?B:' ;AB' < ;> B' < ' U, ' UB ;' ,D, 0;' A :' AB' A,=' 0; 22' <' =<>H;' ;A, ;' AB' ?<>2=' H D' < ' ;AB' , @' ' 0, B;@6' K ' UB' =<' D<:' ' BB2' ,' 2 ;;2B' , W B;@' ;<' D<' 2 B' DB ;2B B :' <>;' < ' ;AB' A,22' =<< ' IF, ; ?>2, 2@' , ;B ' ,22' ;AB' F BF, ,; < 0' ' A,EB' ,=B' ;<' B ,H2B' >0' ;<' =<' 0<J:' , =' <;' <>;' < ' ;AB' H,? ' =<< ' < ' H@' ;AB' , B,68

;' 0' ?> <>0' ;<' =' ;A, ;' ' ;A 0' <0;' ;B B0; D' = 0F, ;?A' ;<' %< =' % EB F<<2' & B22 D;< ' = 0; ?;2@' ,00B ;0' ;A, ;' A 0' U< 0;' B B @' U,0' ;AB' DA<0;' < ' ' C<A ' 1 < < B K AB' D B, ;' = 0Y ,=E, ;, DB' > =B ' UA ?A' ' 2, H<> ' 0' ;A, ;' ' C<A ' 1 << B:' UA<' U,0' AB B' HB < B' B:' D, EB' A 0' <F < ' ;A, ;' +< ;>D, 2' ?<>2=' <;' HB' =B B =B=' H@' ;AB' , @' > =B ' A 0' ?< , =6' ;' 0' <HE <>0' ;A, ;' ;AB' ?<> ; @' U,0' ' ,' EB @' = B B ;' 0 ;>, ; < ' ,;' ;A, ;' ; B' < ' UA, ;' ;' 0' , ;' F B0B ;:' , =' ;A, ;' ' , ' ' ,' EB @' = B B ;' 0 ;>, ; < ' < ' ;A, ;' ' UA ?A' AB' <> =' A 0B2 6 6 6:' @B;' FB 0< 0' UA<' <>DA;' ' BB' ,20<' E<26 6 F, DB' P:' < ' ;A 0' H<< 6

;<' HB' HB;;B ' ,?M>, ;B=' U ;A' ;AB0B' ,?;0' B ;B ;, ' ,' ?B ;, ' F BN>= ?B' ,D, 0;' ;AB' ,=<F; < ' < ', @' F2, ' < ' <FF<0 D' ;AB' B B @' < 'UA ?A' +< ;>D,2' 0' ;<' HB';AB' ;AB,; B6' 'A,EB' ,0' >?A' B0FB?;' ,0', @' ,' < ';AB' <F < ', =' N>=DB B ;' < ' 'C<A ' 1<< B:' , =' '0A<>2=' 0; >0;' @' <U ' ';' UB B' <FF<0B=' ;<' A 0' ',' ?,0B' UAB B' AB' A,=' A,=' ;AB' <FF< ;> ;@' < ' <U D' , =' ?< 0 =B D6' $>;' AB' F<0 ; EB2@' BU' <;A D' ,H<>;' +< ;>D,2:' , =' ?<>2=' <U' <;A D' ,H<>;' ;0' BW 0; D' 0;,;B AB' <0;' EBW,; <>0' ;A D' < ' & B22 D;< ' U,0' ;A,;' K ;AB' FB 0< 0' UA<' <>DA;' ;<' A,EB' <U ' HB;;B :8' @B;' UB B' FB FB;>,22@' >;;B D' B2, ?A<2@' E,; ? ,; < 0',0';<' ;AB',FF <,?A' < '= 0,0;B :' ?2>=B=' 0< B' < ' A 0' <U ' 0B < ' < ?B 06' 'A,EB' 0BB ',' 2B;;B ' < ',' DB B ,2' ' +< ;>D,2' ;<' A 0' B =' ' # D2, =' ?< ;, D' 0>?A' FA ,0B0' ,0';A 0G K' ' <0;' 0; < D2@' 0>0FB?;' ;A,;' HB < B' , @' < ;A0' , B' <EB ' <> ' AB,=0' ;AB B' U 22' HB' <' <FF< ;> ;@' < ' ;A 0' B F2<@ B ;' I;A,;' < ',' ?,E,2 @' H D,= B J' 2B ;' ;<' ;' %' < ';AB' < ; B ;' ,;' 2B,0;6' AB' BW;' ?, F, D ' U 22' ??<0B' ;AB' BEB ; >2' 0?B B' ' ;AB' +B 0>2,:' ,0' , ' ,0' UB' , B' ?< ?B B=7' < ' ', ' =B? =B=2@' < ' <F < ' ;A,;' B ;AB ' I 1, 0A,2J' & B22 D;< ' < ' I 1, 0A,2J' $B B0 < =' U 22' F BEB ;' ;AB' ,FF <,?A D' 0>HN>D,; < ' < ' +< ;>D,268' ' ,D, G K' ', ' M> ;B' 0> F 0B=' ,;' %< =' & 68' F2, ;' = 0F<0 ; < 6' '0>0FB?;' AB' BB20' A 0B2 ';<;;B D' < ' A 0' ;A < B:' , =' U 0AB0' ;<' ?< ? 2 ,;B' ,;' , @' 0,? ?B' AB' BM>B ;' ?< F2, ;0' ' & B22 D;< 8' ?< B0F< =B ?B' ,0' ;<' ;AB' 0< ;' < ' 2B;;B 0' ;A,;' UB B' D< D' A< B' ;<' # D2, =' ';AB' 0F D' < ' 0> ? B ;2@' 0A<U' ;A,;' ;AB0B' =<U AB, ;B=' E BU0' UB B' <;' > Y ?< < ', < D' A 0' 0>H< = ,;BO6' ';AB' DB B ,20' < ';AB' 0F<;' < B0,U' = 0,0;B :' ;' 0' <' U< =B ' ;A,;' ;AB' 0;B 0' '%< =< ' B2;' , W <>0:' , =' B >0B=' ;<' HB' ?< < ;B=' H@' ;AB' ?< =B ;' = 0F,;?AB0' < ';AB' < , =B A B 6

T' 22' ;AB0B' M><;,; < 0', B' < ' & B22 D;< ';<' %< =' % EB F<<2:' F 2' :' :' ,' 2< D' = 0F,;?A' U ;;B ' < ' . RB>:' BEB @' U< =' < ' UA ?A' 0' UB22' U< ;A' 0;>=@6

^ ' <> =' ;AB0B' F,00,DB0' '2B;;B 0' ;<' 'C<A ' %B' 1 B ?A, ;:' ;AB ' ' ?< , =' ,;' ;AB' ;, ' <22BDB' ,;' DA' & @?< HB:' < ' ,' A DA2@ F2,?B=' B =' ' +< ;>D,26' ;' 0' <;,H2B' ;A,;' <;AB ' ?< ;B F< , @' BF 0;2B0' < ' @<> DB ' B :' <2=' F>F 20' < ' %B' 1 B ?A, ;:' 0A<U' ,' , ' < B' ?ABB @' 0F ;6' AB' ?< B0F< =B ?B' I < 'UA ?A' '0A,22' A,EB' , @' <;AB ' F,00,DB0' ;<' M><;BJ' U,0' F2,?B=' ,;' @' = 0F<0 ; < ' H@' ;AB' = B0' < ' ' B @' %B' 1 B ?A, ;:' D , =0< ' < ' 'C<A 6

: 6 1 , @ <;AB 0 A,= 2B00 ;A, ' A,2 ' ;AB ' ?< F2B B ;6 AB 0;' ;A D ;A,;' BM> B=' ;< HB =< B U,0 ;< 22 >F ;AB D,F0:' , =' ;A 0 U,0 ,??< F2 0AB=' => D ;AB U ;B ' < ' 5 ' H@ ,' 0; DB ;' >0B < ' ;AB ?< 0? F; < ' 2,U ,2 B,=@ BW 0; D6 AB 2 B BD B ;0 ' ;AB $>00,?< ?, F, D ' 0A<UB=:' U ;A A, =2@ , ' BW?BF; < :' : ' < ' : ' B B?; EB0 F B0B ; V 6B6 ' ;AB 0 ? ' , =' K =B; , 20 , B ,==B=' ;AB@ UB B B, 2@ < ' M> ;B >F ;< ;AB ' B0; ,H2 0A B ;' < ' : ' AB ?,E,2 @ U,0 2B00 B B?; EB6 ;AB > HB ' < ' B ' ?<>2=' HB 22B=' >F:' H>;' A< 0B0 UB B A, =' ;< =:' , =' ' ;AB B =' & B22 D;< ' 0B ;' <> ' < ' ;AB ;UB2EB BD B ;0 ;< =< = 0 <> ;B=' =>;@ ' D, 0< :' , =' 0B EB=' <>;' ;AB ' <> ;0 ;< ;AB B , D B DA;:' UA ?A BEB ;AB2B00 ?<>2=' BEB ' 0A<U < B ;A, ' ' < ' O ' 0,H B0 F B0B ;:' <>;' < ' ;AB ' < ,2 5O6 +< ;>D,2 0 <;' ,' A< 0B H BB= D ?<> ; @:' , =' ;AB $; 0A ?,E,2 @ U,0 ?< FB; D U ;A ;AB ,; EB < ' ;AB 0 ,22 0>FF2@ < ' B <> ;0 ;A,;' ?<>2=' HB F <?> B=6 AB , ; 22B @:' < ' ;AB <;AB ' A, =:' U,0 A DA ' 0; B D;A , =' EB @ 0,; 0 ,?;< @6

1 B B > HB 0 , B <' ;B0;' < ' ;AB B ? B ?@ < ' ,' A<0;6 AB UB, ' F< ;' < ' ;AB <2=' ,; < ,2 , @ A,=' HBB V ,0 UB B ; < B=' ' , <;AB ' F2,?B V ;AB B B;B , =' > 2 ;, @ ?A, ,?;B ' < ' ;0 H<=@ < ' < ?B 0V < B B0FB? ,22@ < ' ;0 0B < ' < ?B 0^6 AB N> < ' , 0:' 22B=' >F 0 ?B ;AB " B ?A E,0 < ' U ;A @<> D B ' UA< A,=' ;, B ' >F ;AB 2 ;, @ ?, BB ' < ' F,; <; ?' <; EB0:' UB B ;B2@ HB;;B 6 $@ ;AB 0B?< =' @B, ' < ' ;AB U, ' ;AB B UB B , @ ,= ,H2B < ?B 0 , < D ;AB 6 $>;' ;' U,0 B ' ?,F,H2B < ' A, =2 D ,' H,;,2 < ' < ' ,' BD B ;' ;A,;' UB B U, ; D6 & B 0,U A<U $B B0 < =' A,=' HBB ' < ?B=' ;<' ; <=>?B , @ $; 0A < ?B 0 ;< ;AB 0B E ?B:' ;A<>DA AB U,0 ,U, B ;A,;' ;AB FB 0< ,2 F =B < ' ;AB +< ;>D>B0B < ?B 0 U,0 H ;B 2@ A> ;' ;AB BH@6 0 N>0; ?,; < ' ,@ HB =B=>?B=' < ' ,' ?< =B ; ,2

T ' BF;6 :' 5:' ;AB =:' UA ?A A,=' HBB ' =B0; <@B=' H@ <>2;' ,;' F< ;<:' A,=' < 2@ 5 ' B 6 AB ;A 2 ,=' H>;' P5:' ;AB ;A 44:' ;AB O;A P 6

' B ' BD B ;0 F B0B ;' ,;' $>00,?< A,=' <EB ' : ' B ' B,?A:' < 2@ < B 2B00 ;A, ' 6 A 0 U,0 ;AB =:' B ; < B=' ,H<EB ,0 F ,?; ?,22@ < Y BW 0;B ;' ,' @B, ' HB < B6 ;' A,=' < 2@ B? > ;B=' >F ;< ;AB 0; B D;A' < ' < B H,;,2 < 6 ,22 ;AB B0;' A,=' ;U<6 AB 0; < DB0;' BD B ;' U,0 ;AB ;A U ;A :O ' B 6

^ BB E<26 6 F,DB0 6 6

4P & # % %) ( ) 8 + # +) A

, = < ;AB ,0 <0 2 1 <>;B0: UAB B ; U,0 <0; > 2 B2@ ;A, ; , @ 0B <>0 >F; < < ;AB " B ?A U<>2= ; , B F2, ?B 6 B A, = , 2, DB < ?B F2, ?B= > =B A : H>; ; = = <; ??2>=B , 0 D2B BD>2, BD B ;: , =: U ;A 2 ; , < 2@ , ; A 0 = 0F<0 ; < : ; &, 0 A<FB= ;A, ; AB U<>2= HB = 0?<> , DB= < , ; ;B F; D , @ A, R, =<>0 BWFB B ;06 1 < B<EB : AB U, 0 D EB , $; 0A 0B?< = ?< , =: 0; C<A & 20< , = , ;B U, =0 1 22B : ;< ?> H A 0 B??B ; ? ; B0 0< , , 0 U, 0 F<00 H2B6 $, ??B2, : , <;AB < ?B < =<>H; >2 B ;: H>; < B =, DB <>0 < ;< F = ;@ ;A, < , 0A B00: U, 0 D EB ? ?A, DB < ;AB 2 ; , < ;AB ;A BB < ;AB F <E ?B0: 0< ;A, ; 2EB , U, 0 ;B?A Y ?, 22@ > =B A 0 < =B 0 V ;A<>DA ;AB < , 2 0>H< = , ;B U<>2= 0BB ;< A, EB F, = 2 ; ; 2B , ; ;B ; < ;< A 0 0>FB < 6 AB <0; F< ; , ; F<0; A<UBEB : , 00 D B= ;< , +< ;>D>B0B < ?B U, 0 ;AB D<EB < 0A F < #2E, 0: ;AB 0; < DB0; < ; B00 < +H ;>D, 2: , = < B UA ?A U<>2= 0; , = ;AB < B < ; < ;AB H, ; ;2B ;AB " B ?A , =B ;AB 0>H0 = , @ E, 0 < 0<>;A < ;AB , D>0: UA ?A & B22 D;< U, 0 ?2 B= ;< BWFB?; 6 AB ?< , = < ;A 0 D B, ; 0; < DA<2= , = ;AB P: B < ; 0 D, 0< I< UA< A, 2 UB B BD>2, 0J U, 0 D EB ;< (B B , 2 %B ;B: , , ?; EB , = DB <>0 < ?B : , = IUA, ; U, 0 < B F< ; , ; J , , UA< <HB@B= < =B 06 , 22 ;AB +< ;>D>B0B AB U, 0 ;AB < B UA< & B22 D;< <0; ; >0; B=7 BEB @ $; 0A , , ;< < ;AB U, UA< ?, B ?< ; , ?; U ;A A A, 0 , U< = < F , 0B A 0 HBA, 2 6 ;AB <;AB , ; EB DB B , 20: %B?< : ?< , = < , = E 0 < : , = "< 0B?, : ?< , = < , H D, =B: UB B U ;A ;AB B2= , @6 1 , =, U, 0 D EB ?A, DB < ;AB 2 ; , <) < ;AB #0; B , => , : UA< UB B 2 B2@ ;< HB ;AB ;A ? B0; < ;AB ; <>H2B6 $>; ;AB <;AB +< ;>D>B0B > ;0 < ;AB , 22 B= A<0; UB B > =B $; 0A < ?B 0 6 + , ? : ?A H, 2= , = 2BW, =B , FHB22: 1 , ? 1 , A< : <2B , : , EB@: <22 0: , = $, = < =

T 2EB , U, 0 ;AB =B0F, < $B B0 < = , = A 0 ?A B < ;AB 0; , 8 ' H, , 6 AB 2, ; ;B U ;B0 I F 6 5: J 6 !22 0 DB B , 2 0 ;AB <0; BW; , < = , @ < , 22 ;AB FB<F2B ;A 0 BW; , < = , @ ?<> ; @6 +B FB; >, 22@ 2>?; >, ; D V ?, F, H2B < 0; , = D 0; 22 V , 2U, @0 U 0A D ;< <EB H, ? U, = < < U, = V , 22 A 0 <EB B ;0 ;< < F> F<0B H>; ;A, ; < A, ,00 D A 0 ; <<F06 AB , 0 B ;AB EB @ UB, < EB @ =B0 D D V FB A, F0 H<;A6 @A<U AB 0 , 0?A BE<>0 ?A, 2, ; , : , = U 0A ;AB 1 , 0A, 2 U<>2= <; @ B2= ;< ;AB F BN>= ?B0 < ;AB FB<F2B H@ B F2<@ D A 68

A,=' ?A, DB' <' ;AB' BD>2,' H D,=B0' <' ;AB' B2=' , @6 AB' ,; EB' DB B ,20:' 0,EB' ;A<0B' ,H<EB' B ; < B=:' UB B' F2,?B=' ' ,= 0; ,; EB' F<0;0:' <' ' ?A, DB' <' ;A<0B' 0B?; < 0' <' ;AB' 2 ; ,' UA ?A' UB B' F <H,H2@' =B0; B=' ;<' 0BB' <' 0B E ?B6

AB' 0B?< =' F< ;' <' = ?>2;@' ' ;AB' < D, R,; <' <' ;AB' +< ;>D>B0B' , @' U,0' ;AB' ?< 00, ,;6 ' ;AB' <2=' =,@0' ;' A,=' HBB' ,' F> B2@' ? E 2 ,' H , ?A' <' ;AB' 0B E ?B:' < 2 ;, @' ;B =, ;0' =B,2 D' U ;A' ?< ; ,?;< 0' , =' B ?A, ;06 "<' ;A 0' A,=' HBB' 0>H0; ;>;B=' ,' ?: ' '.%H 2% %(' , 2@' ?< F<0B=' <' < ?B 0:' UA ?A' F <EB=' ,0' B B?; EB:' ' <;' ,0' ?< >F;:' ,0' ;AB' H<=@' UA ?A' A,=' F B?B=B=' ;6 AB' $; 0A' D<EB B ;' A,=' ;, B' <EB' ;AB' B0F< 0 H 2 ;@' <' F,@ D' A,2' ;AB' +< ;>D>B0B' , @ :' H>;' <;' ;A,;' <' BB= D' ;:' , =' =B0F ;B' <' ;AB' A, =0< B' 0>H0 = B0' ;A,;' ;' F, =' ;<' ;AB' BDB ?@' <' ;AB' DB B ,2' F> F<0B0' <' ;AB' U, :' ;AB' ,; EB' ; <<F0:' B0FB? ,22@' ;A<0B' M>, ;B B=' , ' <' % 0H< :' UB B' < ;B ' ' ,' 0;,;B' <' 0B 0;, \8,; < 6 K AB' +< ;>D>B0B' ?< F0' <>DA;' ;<' A,EB' ,' ?< 00, ,;' ,;;,?AB=' ;<' ;AB :' , =' ' HB2 BEB' B,?A' H D,=B' A,0' ,' ?< 00, @:8' U <;B' & B22 D;< :' K H>;' ;AB@' A,EB' <' ,D,R B0' , =' <' < B@' ;<' F> ?A,0B' 0>FF2 B0' B' , ' = ?>2;@' , <0B' < ' ;AB' ,?;' ;A,;' ;AB' C> ;,' =B' . EB B0' 0A , ' < ' ;AB' AB,E@' BWFB 0B' < ' < D, R D' ,' F <FB' ' ; , 0F< ;' ; , :' , =' ; B=' ;<' , B' 0A ;' U ;A' BM> 0 ; < B=' ?, ;0' , =' <WB :' UA ?A' UB B' = ?>2;' ;<' DB;' I0 ?B' ;AB' $; 0A' , @' U,0' ?< FB; D' U ;A' ;AB' +< ;>D>B0B' < ' = ,>DA;' , ,20J' , =' 0; 22' A, =B' ' ;<' B;, V < ' ;AB' FB,0, ;' = EB' ' ,2U,@0' ,H0?< =B=' U ;A' A 0' HB,0;0' UAB' ' AB' <> =' , ' <FF< ;> ;@6 <;AB' '= ?>2;@' U,0' ;A,;' ;AB' C> ;,' ; B=' ;<' BB=' ;AB' ; <<F0' U ;A' BM> 0 ; < B=' ?< :' 0;B,=' < ' F,@ D' < ' ;' U ;A' < B@' =<U' 7 AB ?B' ;' D<;' D >=D D' 0B E ?B6 K' <U' < ' BWFB B ?B:8' <H0B EB0' & B22 D;< :' K' ;A,;' ;AB' +< ;>D>B0B' , @' ?<>2=' <;' HB' ' ;AB' = 0; B00' > =B' UA ?A' ;' 0> B 0:' < ' U, ;' < ' F <E 0 < 0:' ' < 2@' ,' F, ;' < ' ;AB' <<=' ;' B?B EB0' < ' ;AB' ?<> ; @' UB B' F, =' < 6' =' AB' 0>DDB0;B=' ,0' ,' B B=@' ;A,;' ;AB' $; 0A' 0;B 0' 0A<>2=' B, , ' F, ;' < ' ;AB' 0>H0 =@' < ' >0B' < ' ;AB' ?< 00, ,;' , =' <' <;AB' F> F<0B 6 ;' U,0' 2< D' HB < B' ;A 0

K' . R6 ;AB' 0;:' =:' =:' O;A:' 4;A:' ;A:' ;A:' ;A:' O;A:' P;A:' P;A:' 5;A' <' ;AB' 2 B:' , =' ;AB' 0;:' =:' , =' =' ,aN,=< B06

& B22 D;< ' ;<' 22:' C, 6 O: 6

T & B22 D;< ' ;<' . 22 B 0:' C, 6 : 6

1)6 ')

, ; ;B ' U,0' 0B;' ;<' DA;06' $B B0 < =80' ?< B0F< =B ?B' ' '
H 0;2B0' U ;A' ?< F2, ;0' ,0' ;<' ;AB' B ? B ?@' < ' ;AB' C> ; ,' =B'
. EB B0 6

' ;AB' BD>2, ' , @' U,0' H, =2@' B=:' 0<' ;A, ;' =B0B ; < ' , ='0 ? Y
B00' UB B' H<;A' ;<<' F BE,2B ;' ' 0< B' ?< F0:' ;' U,0' <;' ;<' HB'
BWFB?;B=' ;A, ;' ;AB' 2 ; ,' U<>2=' , B' HB;;B 6' & B22 D;< ' A,=' '
< =B B=:' , =' $B B0 < =' A,=' , , DB=' < :' ;AB' B H<= B ;' < 'BEB @'
< B' < ' ;AB' O ' 2 ; ,' BD B ;0' < ' ;AB' , ; < ,2' B0; ,H2 0A B ;6'
AB@' 0A<>2=' F <FB 2@' A, EB' D EB ' 4 : ' B :' H>;' 0>?A' ,' D> B'
U,0' BEB ' B, ?AB=6' < B' < ' ;AB' BD B ; ,2' = 0; ?;0' UB B' ;<<'
;A 2@' FB<F2B=' ;<' D EB' ;AB' 2>22' : ' B ' , ;' UA ?A' B, ?A' U,0'
,00B00B=6' ' <;AB 0' ;AB' < ?B 0' F2, ?B=' ' ?A, DB' UB B' ?, F, H2B:'
< ' ;AB' 2<?, 2' ,D 0; , ;B0' B?, 2? ; , ;6' 1 , @' BD B ;0' ?<>2=' '
0A<U' < 2@' P ' < ' P ' H, @< B;0' ' :' BU' <EB ' : ' ' AB'
;<; ,2' > HB ' > =B ' , 0' ,;' ;AB' ; B' < ' 1 ,00B ,80' E, 0 < ' ,@'
A, EB' B, ?AB=' O : ' H, @< B;06' ' ;AB' O ' BD B ;0' B DA;'
HB2< DB=' ;<' ;AB' 2, =0' 0<>;A' < ' ;AB' ,D>0:' , =' UB B' BEB '
H <>DA;' >F' ;<' ;AB' < ;7' ;AB@' > 0AB=' ;AB' D, 0< 0' < ' #2E, 0'
, =' , F<' 1 , @< :' , =' ,' ?< F0' < ' <H0B E, ; < ' < ' ;AB' 2<UB '
(>, = , ,:' =B0; B=' ;<' U, ;?A' ;AB' " B ?A' ' ;AB' = B?; < ' < '
@, < ;B' , =' ;AB' < =, =<' =B') BH2, :' 2B0;' , @' > BWFB?;B=' '
, = DA;' HB' ,=B' ' ;A, ;' M>, ;B 6' AB' EB' BD B ;0'
< ' ;AB' = 0; ?;' B= , ;B2@' <> =' ;AB' ?, F ; ,2' UB B' , ;' U< ' < '
;AB' BEB D <U D' 2 B0' < ' < B0' . B= ,06' B' BD B ;' U,0' '
D, 0< ' , ;' +B ?AB:' ;U<' , ;' H , ;B0:' ;A BB' , ;' 2 B = , 6' AB'
, ' < ?B:' ?< 0 0; D' < ' ;AB' B , D' > ;0' ?< ; H>;B=' H@' ;AB

' *8 ' H, ' U ;B06' 1 , @' O:' !' >?A' 0' ;AB' F<EB ;@:' HB? 2 ;@:' , =' U, ;' < '
, , DB B ;' < ' ;AB' +< ;>D>B0B' D<EB B ;:' ;A, ;' , @' BD>2, ' 0@0;B ' < '
0>FF2@' 0' <;' ;<' HB' BWFB?;B=6' AB' UA<2B' ? E 2' H , ?A' < ' ;AB' , @' 0' '
0>?A' , ' 0; , ;B' < ' ?< >0 < :' ;A, ;' ' A<2=' ;' F<00 H2B' ;<' ?, @' < ' , ?; EB' <FB , Y
; < 0' < ' < B' ;A, ' , ' BU' UBB 068

' ' <;B' ' *8 ' H, 80' = , @:' UAB ' AB' U,0' , D' , ' 0FB?; < ' ;<> '
U ;A' $B B0 < =' , ;' ;AB' B =' < ' ;AB' U ;B :' !' ;' , =, <' , ' EB @' D<<=' BD B ;'
< ' 2 ; , :' : ' 0; < D:' ;A, ;' < ' 1 , ,68' K' H , ;B0:' ;U<' BD B ;0' < '
2 ; , :' %<>0, <' : P:' <> B' : P:' , 22' , B=68' $>;:' < ' ;AB' <;AB ' A, =:'
K' . RB>:' D, 2:' , ?<0<:' < =B B=' ;<' HB' , 00B H2B=' , ;' 2 B =, :' A, EB' < 2@ V'
;AB' 0;' P4:' ;AB' 0B?< =' P :' ;AB' 2, 0;' P ' B2<? 0:' , =' ;AB' =B0? F; < ' < '
; <<F0' ;AB' EB @' U< 0;68' ' ?<> 0B' ;AB' > HB 0' UB B' 0< BUA, ;' A DAB ' H@'
;AB' BW;' >D>0;6

' AB0B' BD B ;0' UB B' %, D<0:' , E , :' $BN, :' #E< , :' . 22, E ? <0, :'
+< ; , 2BD B:' 2?, R, ' =<' >2:' B;>H, 26

) < ;A' , =' ;AB' $B ,:' U,0' = E =B=' ;<' EB' ?< F0:' =B0; B=' F, ;2@'
< ' ,?; EB' <FB ,; < 0' ,D, 0;' ;AB' B B @80' 2, 0' , =' B, :' UAB ' AB'
0A<>2=' B ;B ' +< ;>D,2:' F, ;2@' < ' ;AB' =B B ?B' < ' F< ;<' , =' ;AB'
,0 <0 1 < ;B0:' ' , @' ,00,>2;' 0A<>2=' HB' ;A B,;B B=' ' ;A,;'
= B?; < 6' AB0B' = E 0 < 0' 0;<<=' ,0' <22<U0G V ;A BB' BD B ;0'
> =B ' %B?< ' UB B' 2B ;' ' ;AB' ,0;B22<' $, ?<' ?<> ; @:' ;<' F <;B?;'
;' ,D, 0;' , =0' < ' F, 0A' #0; B ,=> ,6' BEB '> =B ' , ;:'
,22' ?< F0' < ' ;AB' ?<,0; 2, =' HB;UBB ' ;AB' * <> <' , =' ;AB'
1 < =BD<:' UB B' ;<' ?<EB ' F< ;<' < ' ;AB' 0<>;A:' < ' ;<' <FB ,;B'
,D, 0;' ;AB' B, ' < ' ;AB' E,= D' , @:' ' ;' 0A<>2=' 2B,EB' ;A,;'
? ;@' ,2< B' , =' BBF' < ' ;AB' = B?;' <,=' ;<' % 0H< 6' W' > =B '
2EB ,' D>, =B=' ;AB' 0 <0 1 < ;B0:' , =' U,;?AB=' ;AB' " B ?A'
=B;,?A B ;0' ' ;AB' < ;AB ' F, ;' < ' ;AB' F2, 0' < ' %B< 6'
DA;' > =B ' 1 22B ' 2,@' , <> =' F< ;<:' B,=@' ;<' 0>FF< ;'
B ;AB ' 2EB ,' < ' , ;' ' <??,0 < ' 0A<>2=' , 0B' ;B ' ;AB'
?, F, D ' HBD, :' , =' 1 ,00B ,80' ;B ; < ' ;<' 2B,EB' ;AB') < ;A

T ;' ,@' HB' UB22' ;<' , B:' < ?B' < ' ,22:' ;AB' ?< F<0 ; < ' < ' ;AB0B' 1 2 ; ,'
$ D,=B06' 2 B@' UB B' = 0; H>;B=' ,0 <22<U0G V

(, 0< ' < ' H , ;B0G
%<>0,<'
<> B
(, 0< ' < ' 2 B = ,G
. RB>'
D, 2'
, ?<0<'
' ;AB' % B0G
: :' :' 0' < ' % 0H< '
< B0' .B= ,0
& ;A' %B?< ' ,H<>;' ,0;B22<' $, ?<'
=, A,'
<E ;A,<'
,0;B22<' $, ?<'
' =B ' 1 22B ' ,H<>;' F< ;<' G
(> , ,B 0'
. , ,'
$,D,'
$,0;<
. 22,' =<' < =B'
?<0'
$, ?B22<0'
$, ?<

& ;A' , ;:' HB;UBB ' ;AB' * <> <' , =' ;AB' 1 < =BD<' G
EB <'
"B ,'
< H ,'
+< ;<'
1 , ,'
+B , B2
2 EB ,' =<' RB 0'
& ;A' 2EB ,' ,H<>;' $,D, R,G
%, BD<'
A,EB0'
. ' ,' B,2'
$,D, R,'
1 , =,'
1 < ?< E<
& ;A' 1 , =,' ,H<>;' A< , ' G
< =B22,'
, ;, B '
A< , '
%B ,

' 1 22B 80' = E 0 < :' ' ;A :' H>;' , ' <;' 0> B:' ;A, ;' ;AB' 2,0;' <> ' UB B' ;A<0B'
=B;,?AB=' > =B ' & 20< ' ' BF;B HB 6

,2< B' HB?, B' BE =B ;:' A,2 ' 1 22B 8Ø = E 0 < ' U,Ø F2,?B=' > =B ' C<A ' & 20< ' IUA<' A,=' < D ,22@' HBB ' 2EB ,8Ø ?A B < ;AB ' 0;, ' , =' 0B?< = ?< , =J , =' 0B ;' 0<>;A' ;<' ;AB' $B ,' ;<' ?< <FB ,;B' U ;A' , ;6' " ,22@:' <> ' BD B ;0' > =B ' ;AB' +< ;>D>B0B' H D,= B ' 1 , =,' 2,@' ,;' A< , :' ,FF, B ;2@' < ' ;AB' F> F<0B' < ', = D' %B?< ' < ' 0; B D;AB D' ;AB' D, 0< ' < ' H , ;B0Ø A 0' = E 0 < ' >2; ,;B2@' B; B,;B=' ;<' ;AB' 2 B0' < ' < B0' .B= ,06

22' ;AB0B' ; <<F0' UB B' B ; B2@' > ;;B=' < ' ,' F2,?B' ' ;AB' 2 B' < ' H,;;2B7 & B22 D;< ' B >0B=' ;<' W' ;AB ' U ;A' ;AB' BD>2,' H D,=B0:' 0,EB' ' ;AB' D, 0< 0' < ' 2 B =,:' H , ;B0:' , =' #2E,06 B' = B?;B=' ;AB' H D,= B 0' BEB ' ;<' 0 ' ;AB ' ' H,;;2B:' BEB ' ,D, 0;',' >?A' B < ' < ?B' < ' ;AB' " B ?A6 AB ' 0<2B' F> F<0B' U,0' ;<' ?>;' 2 B0' < ' ?< > ?,; < :' ;<' B =B ' , ,>= D' H@' ;AB' B B @8Ø 0 ,22' =B;,?A B ;0' F<0Y 0 H2B:' , =' ;<' B0; ?;' A 0' F<UB ' < ' , D' B?< , 00, ?B0' , ' , B2=6 AB@' UB B' ;<2=' ;A,;' ;AB@' DA;' =B B =' ,' F,00' < ' ,' < =' < ' ,' ; B:' 0<' ,0' ;<' =B2,@' ;AB' ,=E, ?B' < ' ,' A<0; 2B' ?<2> :' H>;' ;A,;' ;AB@' UB B' BEB ' ;<' ?< ;' ;AB 0B2EB0' ;<' ,' 0B <>0' ?< H,;' U ;A' , @' ?< 0 =B ,H2B' H<=@6 < E<@0:' 0; ,DD2B 0:' 0 ,22' =B;,?A B ;0:' UB B' ;AB' D, B' < ' UA ?A' ;AB@' >0;' F B@6 AB' F <D , B' U,0' <;' ,' H 22 , ;' < B' ;<' 2,@' =<U ' HB < B' , ' , H ; <>0' < ?B :' , =' < B' ;A, ' < ?B' 2EB ,:' , ;:' , =' & 20< ' = 0<HB@B=' < =B 0:' , =' ; B=' ;<' U ;A0;, =' ,' >22' " B ?A' = E 0 < ' ' 0< B' ?A<0B ' F<0 ; < 6 >?A' BWFB B ;0' ,2 <0;' ,2U,@0' B =B=' ' ,' = 0,0;B 6 ;' U,0' <;' 0> F 0 D:' < ' ;AB' 2 ; ,' UB B' <;' ; <<F0' < ' UA< ' >?A' ?<>2=' HB' BWFB?;B=6 AB' HB0;' B ' ' BEB @' = 0; ?;' A,=' HBB ' ;, B ' < ' ;AB' BD>2, ' , @7' ,22' ;AB' ; , B=' < ?B 0' UB B' ,20<' BB=B=' ;AB B6 AB' 2 ; ,' . %(' UB B' ?< F<0B=' < ' ? E 2 , 0' UA<' A,=' ;<' 2B, ' ;AB ' =>; B0' N>0;' ,0' >?A' ,0' ;AB' F E,;B0' UA< ' ;AB@' UB B' 0>FF<0B=' ;<' 0; >?;6 22' ;AB' F,; <; ?' , =' B B DB; ?' @<> D' B ' < ' ;AB' D<EB D' ?2,00B0' A,=' 0<>DA;' ?< 00 < 0' ' ;AB' 2 B7' ;AB' 2B00' U 22 D' , =' ,?; EB' UB B' = EB ' ;<' ;AB' 2 ; ,6 B E ?B' ;AB B ' H <>DA;' B ;AB ' >?A' ? B= ;' < ' >?A' F < <; < 6 ' ;AB' BDB ?@' A,2 0;, EB=' ;AB' BD>2, 0:' ;' ;A BB M>, ;B 0;, EB=' ;AB' 2 ; ,:' UA ?A' U,0' < ,22@' ' ,' 0;,;B' < ' =B0; ;>; < ' < '?2<;AY D:' 0A<B0:' , =' <<=6 , =2@' ,' BD B ;' U,0' F <E =B=' U ;A' > < 07 ,0' ,' >2B' < 2@' ;AB' < ?B 0' 0A<UB=' ;AB' BD>2,; <

U <;B' ;A, ;:' K'UA, ;BEB ' ;AB' F, , =0' ,@' 0,@' ;<' ;AB' ?< ; , @:' ;A 0' U, ' < ' ;AB' FB,0, ; @' 0' H@' <' B, 0' F< ; , ;:' BW?BF;' ,D, 0;' D < , ;' , =' > = 0? F2 B=' ; <<F0

& AB ' & B22 D;< ' B0<2EB=' ;<' ?,22' <>;' ;AB' =B , R,' ' ' AB' U,0' D < , ;' < ' < B' < ';AB0B' ,?;06') BEB ;AB2B00:' AB' 0 0;B=' ;A, ;' ;AB' BDB ?@' 0A<>2=' 00>B' ;AB' <2=' <@,2' !' = , ?B' 8 ;<' ?,22' <>;' ;AB' 2BE@6' 0' <HNB?;' U,0' ;A BB <2=' 6 < ' ;AB' F<2 ; ?,2' , =' < ,2' F< ;' < ' E BU' ;' U,0' B?B00, @' ;<' ; , B' ;A 0' B,0 B:' HB?, >0B' ;' U,0' ;AB' , ? B ;' , =' B0; , H2 0AB=' B;A<=' < ' F <??, D' ;A, ;' ;AB' ?<> ; @' U,0' ' =, DB 6' ;' U,0' 0<' > =B 0;<<=' H@' ;AB' FB,0, ; @:' ' UA<0B' B < B0' ;AB' ; ,= ; < 0' < ' ;AB' F, 0A' E,0 < 0' UB B' 0; 22' B0A'7 ;AB@' BWFB?;B=' ;<' HB' 0> < B=:' , =' U<>2=' A, EB' =<>H;B=' ;AB' B ?B' < ';AB' B B DB ?@' ';AB@' A, =' <;' HBB 6' AB' ?, 22' U,0' , ;' < ?B' , ' , FFB, 2' ;<' ;AB ' F, ; <; 0 :' , =' BM> E, 2B ;' ;<' ,' F <??, , ; < ' < ' , ; ,2' 2, U6' B?< =2@:' & B22 D;< ' A<FB=' ;<' =' ,00 0;, ?B' ;<' ,' ?B ;, ' =BD BB' < ';AB' U< ' UA ?A' AB' A, =' 0B;' ,0 =B' < ' ;AB' 2 ; ,:' H@' ;AB' , =' < ';AB' =B , R,6' +B E, = D' ;AB' UA<2B' ?<> ; @ 0 =B:' , =' <U D' BEB @' D<, ; ; ,? ' , =' ,??B00 H2B' ,0; B00:' ;AB ' <;2B@' ?< Y F, B0' U<>2=' 0> <> =' ;AB' E, = D' , @' ,0' ;' , ?AB=:' F BEB ;' , ,>= D' H@' 0 ,22' F, ; B0:' , =' B =B ' ;B ?< > ?, ; < ' HB;U B ' ?<2> 0' F<00 H2B:' 0, EB' H@' 2, DB' =B; , ?A B ;06' " B ?A' , ,;< 0' < ' ;AB' ?, F, D ' 0FB, ' < ' K';AB' ? >BZ' ?, 22<>0 B00' U ;A' UA ?A' & B22 D;< ' BWF<0B=' ;AB0B' A, 2 , B=' FB, 0, ;0' ;<' ;AB' U , ;A' < ' ;AB' <0;' B ? B ;' , @' ' ;AB' U< 2=:8' , =' U, W' 0B ; B ; ,2' <EB ';AB' 0B B0' < ';AB' +< ;>D>B0B6' $>;' 0B ; B ;' < ' 0>?A' ,' M>, ;B ' 0' 0>0F ? <>0C' ;' 0' ,H0> =' ;<' =' <2=' 0<2= B 0' U ; D' ,0' ' ;AB' , ' =>;@' < ' ,' DB B ,2' =B B = D' , ' ?<> ; @' UB B' ;<' 0F, B' ;0' FB, 0, ; @' ,0' >?A' ?< EB B ?B' ,0' F<00 H2B6' * =' <;') , F<2B< ' ' O' , B' BEB @' B =B, E<> ' ;<' , 0B' %< , B' , =' A, F, D B' % ' ((% ';AB' B, ' < ';AB' 22 B0:' , =' A, 0' , @' " B ?A' ? ; ?' BEB ' H2, B=' A ' < ' =< D' 0<' P' & , 0' ;AB' , ?;>, 2' 0B @' 0> B B=' H@' ;AB' A, H ; , ;0' < ' $B ,' 0<' >?A' D B, ;B ';A, ' UA, ;' ;AB@' U<>2=' A, EB' B => B=' ' ;AB@' A, =' B , B=' , ;' A< B:' , =' < B B=' <' B0 0;, ?B' Z' AB' ?<> ; @ 0 =B' U<>2=' A, EB' HBB ' 0; FFB=' H, B' H@' , ' , @' < ?B=' ;<' , B U,

' *> <> BR:' 9' '%' ' R ':5 3' F, DB' 6' AB B' U, 0:' A<UBEB :' < B' <;, H2B' ?< H, ;' , ;' . 22, ' +< ?, ' ';AB' ,0 <0 1< ;B0' UAB B' ,' UA<2B' F, 0A' ?<2> ' < ' : ' B ' U,0' =B B, ;B=' H@' ;AB' =B , R,6

0>FF< ;' U, :8' , =' < B' ?, ' A, 8=2@' HB2 BEB:' N>=D D' < ' F, ,22BZ'
? =B ;0' ' F, :' ;A, ;' <>; ,DB0' U<>2=' A, EB' HBB ' ?< 0F ?><>0'
H@' ;AB ' ,H0B ?B6

$>;' ;' U<>2=' 0BB ' ;A, ;' ;AB' ;A =' < ' & B22 D;< 80' B,0< 0' < '
?,22 D' <>;' ;AB' =B , R,' U,0' , ' < B' ?<DB ;:' , =' 2,@' B, B '
;<' ;AB' AB, ;' < ' A 0' 0?AB B' ;A, ' ;AB' <;AB ' ;U<6' 2 <>DA<>;'
+< ;>D>B0B' A 0;< @' ;AB' 0> < 0' ;<' ;2 B' 2BE@' % ' ((% A, =' ,2U, @0'
HBB ' ?< H B=' U ;A' , <;AB ' B,0> B:' < ' UA ?A' =BB=' ;'
?<>2=' <;' HB' = 0B ;, D2B= V ;AB' < =B ' ;<' ;AB' UA<2B' F<F>2,; < '
;<' BE,?>,;B' , =' =BE,0;,;B' ;AB' 2, =' ' ,?B' < ' ;AB' ,=E, ? D'
B B @6 AB' >0B' < ';AB' UB,F< ' < '0;, E,; < ' ,D, 0;' ;AB' " B ?A'
U,0' , ' B00B ; ,2F, ;' < ' & B22 D;< 80F2, ' < '=B B = D' +< ;>D,26'
& AB ' AB' ;<2=' ;AB' $; 0A' 1 0; @' ;A, ;' AB' U<>2=' > =B ;, B' ;AB'
=B B ?B' < ';AB' B,2 :' ;A 0' U,0' < B' < ';AB' , ' ?< = ; < 0' < ' A 0'
F2B=DB6 B' A, =' B,2 RB=' ;AB' D B, ;' ,?;' ;A, ;' ;AB' ?< =>?;' < ';AB'
U, ' ' ;AB' +B 0>2, ' =BFB =B=' < ' 0>FF2 B0' ;AB' <2=' ,FA< 0 '
;A, ;' K' HB@< =' ;AB' +@ B BB0' 2, DB' , B0' 0;, EB' , =' 0 ,22' , B0'
DB;' HB, ;B ' 8' U,0' , ;' ;AB' H,? ' < ' ,22' A 0' 0?AB B0' < ';AB' @B0>' 6'
B' ?,2?>2,;B=' ;A, ;' ;AB' " B ?A' U<>2=' =' ;AB' D B, ;B0;' = ?>2;@'
' ,??> >2,; D' 0;< B0' 0> ? B ;' ;<' BB=' , ' , @' < ' E,0 < '
2, DB' B <>DA' ;<' , ;;, ? ' +< ;>D,2:' , =' ;A, ;:' BEB ' ' 0>?A' 0;< B0'
?<>2=' HB' D,;AB B=:' ;AB B' U<>2=' HB' ,' 0; '' D B, ;B ' = ?>2;@' '
DB;; D' ;AB ' ;<' ;2 B' < ;' ,0' ;AB@' UB B' BB=B=6 "< ' <;' < 2@'
U<>2=' ;' HB' A, =' ;<' ?<22B?;' ;AB' ,00' < ' ; , 0F< ;' BM> B=' < '
, ' , @' < ' 4 : :' : :' < ' : ' B :' H>;' ;AB' ?< E<@0'
UA ?A' ;' < B=' U<>2=' =' ;' F<00 H2B' ;<' <EB' <EB ' ;AB' E,0;'
0; B;?A' < ' H, =' <, =0' HB;UBB ' ,2, , ?,' , =' % 0H< :' UAB ' ;AB'
?< > ?, ; < 0' UB B' ?>;' , =' ;AB' 1 2 ; ,' , =' =B , R,' UB B'
B0; D' BEB @' F,00' , =' A 220 =B6 ;' U,0' ,2 <0;' ?B ;, ' ;A, ;'
;AB' E,=B 0' U<>2=' , B' <' 0>?A' , ;;B F;' ;<' BB=' ;AB 0B2EB0'
< ' ;AB' B, :' H>;' U<>2=' 0;, ;' U ;A' ,' <=B , ;B' ; 8, :' ?, @ D'
<' < B' ;A, ' F <E 0 < 0' < ' ,' UBB ' < ' ;U<:' , =' A<F D' ;<' 0>H0 0;'
I ' ;AB' >0>,2 " B ?A' 0;@2BJ' < ' ;AB' B0<> ?B0' < ' ;AB' E,=B=
?<> ; @6 >?A' B0< ?B0' & B22 D;< ' U,0' =B;B B=' ;A, ;' ;AB@'
60A<>2=' <;' =6 AB@' U<>2=' B B' 2< D' HB' 0;, EB=' <>;:' , =
< ?B=' ;<' ,22' H,? ' < ' ;AB ' ,D,R B0:' ?B ;, 2@' 2<0 D' ,' 2, DB'
F <F< ; < ' < ' ;AB ' B ' < ' F E,; < 0' H@' ;AB' U,@6 ' ;A 0'
0?AB B' A, =' HBB ' ?, B=' <>;' U ;A' D =' FB B?; < :' 1,00B ,80'
E,0 < ' U<>2=' A, EB' , <> ;B=' ;<' <' < B' ;A, ' ,' F < B ,=B' ;<

< B0' . B= ,0:' , =' ,' F < F;' B;> ' ;<' ;AB' H< =B 0' < ' F, ' U ;A' ,' , 0AB=' , @6' ' < ;> , ;B2@' ;AB' =BE ?B:' ;A<>DA' ;' U< B=' UB22' , =' U,0' >2; , ;B2@' M> ;B' 0>??B00 >2:' U,0' <;' FB B?;2@' BWB?>;B=' ' BEB @' ?< B ' , =' H@' BEB @' 0>H< = , ;B:' 0<' ;A, ;' ;AB' " B ?A:' 0A<U D' ,' ,D ?B ;' <H0; , ?@:' , =' 0> B D' > ;<2=' F E, ; < 0:' B , B=' HB < B' ;AB' % B0' < ' ;A BB' < ;A0' HB < B' ;AB@' B; B=6' $>;' B; B' ;AB@' = =:' , =' U ;A' ,' 2<00' < ' ,' ;A =' < ' ;AB ' , @:' , =' ,' =BF2< , H2B' =B?, =B ?B' < ' ;AB ' < ,2B:' 0<' ;A, ;' & B22 D;< 80' 0?AB B' U,0' >22@' N>0; B= AB' F2, ' < ' =B B, ; D' ;AB' B B @' H@' ;AB' 0@0;B ' < ' =BE, 0; , Y ; < ' U,0' B ;AB ' K = ?; , ;B=' H@' ;AB' A, =' AB, ;' < ' ,' DB B ,2' ; , B=' ' ;AB' , ; <? <>0' U, 0' < ' ;AB' # , 0; :8' ,0' ?B ; , ' " B ?A' , >;A< 0' A, EB' U ; ;B :' < ' U,0' ;' I, 0' 0< B' < ' ;AB' # D2 0A' , >;A< 0' A, EB' 0>FF<0B=J' 0>DDB0; B=' ;<' & B22 D;< ' H@' ;AB' B,0> B0' UA ?A' A, =' HBB ' ; , B ' ' O' < ' U ;A= , U D' , 22' <<=' , =' ; , 0F< ;' < ' ;AB' 0<>;A' ?<, 0;' < ' # D2, =:' ') , F<2B< ' 0A<>2=' HB' 0>??B00 >2' ' ? <00 D' < ' $<>2<D B6' ;' U,0' , ' , ? B ;' +< ;>D>B0B' =BE ?B:' F , ?; 0B=' < ' ; B' B < ,2' , D, 0;' ;AB' , 0; 2 , ' E, =B :' UA ?A' A, =' BEB ' , 2B=' < ' 0>??B006) < ' A, =' ;' ?< B' ;<' , ' B =' U ;A' ;AB' & , ' < ' =BFB =B ?B' < ' PO :' < ' ;AB' U, ' < ' ;AB' F, 0A' >??B00 < ' < ' 4 O6' & AB ' F, ' A, =' , =B' AB ' 2, 0;' 0B <>0' , 00, >2;' < ' +< ;>D, 2' ' 4P ' I (<=<@80' 0B , H2B' <? U, ' < ' ' =<B0' <;' =B0B EB' ;<' HB' ?<> ;B=J:' ;AB' F2, ' A, =' U< B=' , = , H2@6' & AB ' ;AB' < =B' =8 , =, ' E, =B=' ;AB' $B ,' K' ;AB' ?<> ; @' A, =' HBB ' ' = EB ' c' ' ;AB' <0;' 0@0;B , ; ?' 0;@2B:' , =' BEB @;A D' ;A, ;' ?<>2=' <;' HB' ?, B=' < ' A, =' HBB ' =B0; <@B=:' 0<' ;A, ;' ;AB' F, , =' <> =' A 0B2 ' ' ,' =B0B ;:' HB D' > , H2B' ;<' = 0?<EB ' B ;AB ' F <E 0 < 0:' ?, 0:' < ' FB, 0, ;07' ;AB' A, H ; , ;0' A, =' , H, =< B=' ;AB ' E 22, DB0:' , =' ?, B=' < ' BEB @;A D6' AB' B B @' A, =' ;<' HB' 0>FF2 B=' U ;A' BEB @' B?B00, @' < ' F, G ;AB' , ; @' UB B' A, , 00B=' U ;A' , ; D>B' ' B , D' ;AB' <, =0:' , =' ;AB' ?, E, 2 @ A< 0B0' =B0; <@B=

T ' 2 B' ;AB' , @' " B ?A' U ;B 0' UA<' ?< ;B ;' ;AB 0B2EB0' U ;2' =B <> ? D' & B22 D;< 80' A> , ;@:' +B2B;' I 1, 00B , 80' ?A B ' ?< =, ;J' ?< B00B0' ;A, ;' ;AB' # D2 0A' DB B , 280' F2, ' U,0' FB B?;2@' 2<D ?, 26' ' A 0' @)% A: ' .% 3 ') 5 % .% R ' : 5 3' AB' U ;B0:' K' ' ,' ? ; M>=' 0, 0' , 0< ' 0< ' 0@0;B B' =B' D>B B6' ' B; , ;' ,' FB>' F B0' , 22 H2B' ?B ; B' > ' B B ' B B> ' B ' < H B6' 1 , 0' FB>' =B' DB B , >W <0B < ;' V ' 0, >EB ' > ' F, @0' c' =8> B' ;B22B' , B B68

' ?< =>?; D' F <E 0 < 0 6' ;' 2,0;' =8 , =,' B; B,;B=:' 2B,E D' A 0' 0 ? ' , =' U<> =B=' ,;' (,0;B22<' $, ?<:' U ;A' ,' 2B;;B ' ?< Y B = D' ;AB ' ;<' ;AB' ,;;B ; < ' < ' ;AB' ,22 BO' ' ;A 0' 0, B' U, ' * > <> BR' U <;B6 K' 0' 0<< ' ,0' ;AB' F, , =0' B ;B ' +< ;>D,2' ;AB' 9 D' F>H2 0ABO' ,' =B?2, ,; < :' H@' UA ?A' AB' B N< 0' < ' A 0' 0>HNB?;0' ;<' ,22' >F< ' ;AB' E,=B 0:' , =' ;AB' ,; < ,2' A,; B=' ,2U,@0' BW? ;BO' ;AB ' ;<' BWB?>;B' ;AB' = , ?B6c' 0' ;AB' F, 0A' , @' F>0ABO' < :' ;AB' E 22,DBO' , B' =BF<F>2,;B=:' , =' ;AB' A,H ;, ;0' ,22' H,? ' < ' ;AB' ?,F ;,26' AB' FB,0, ; @' , EB' ;AB B' ' ? <U=0' U ;A' U EBO' , =' ?A 2= B :' 0<' ;A,;' ;AB' D' ,;' ;AB' B =' < ' ;A BB' < ;A0' A,0' : ' < ' : ' BW; ,' <>;A0' ;<' BB= .

A 0' 0<> =0' 2 B' ,' =B0? F; < ' < ' ;AB' D B,;' D ,; < ' < ' :' H>;' U,0' ,?;>,22@' U ;;B ' ' 4PP6' ;' 0' ?2B, :' ;AB :' ;A,;' & B22 D;< ' = =' <;' EB ;' ;AB' 0@0;B ' < ' =BE,0;,; < :' H>;' 0 F2@' >; 2 RB=:' , =' ?, B=' <>;' ;<' ;0' 2<D ?,2' B =:' , ' <2=' ?>0;< ' B00B ; ,22@' ,; < ,2:' , =' , 2 , ' ;<' ;AB' +< ;>D>B0B' < ' ; B' B < ,26' ;' U,0' ;AB' BD>2, ' =BE ?B' < ' ;AB' UB, ' ,D, 0;' ;AB' 0; < D' ' ;AB' 1 ==2B' DB0:' , =' = B B=' ' <;A D' < ' K' (<<=' 9 D' <HB ;8O' B0;, B ;:8' ;AB' ; B A< <> B=' 0@0;B ' ,FF2 B=' H@' ;AB' ?<;0' ;<' ;AB' # D2 0A' ' ;AB' <> ;BB ;A' , =' ;BB ;A' ?B ;> B06

K ' 0; , ;' F2,? 0' D, ' A =B' ,22' 0;< B6
=' H@ B ' @B' F2, B2, =' ;A, ' HB < B:
A, B' 0, 2' ;AB ' F,00' ,U,@' ' A, 0;6
& AB ' ;A,;' ;A, ' =' ,' ;A D' H>;' U, 0;6
<' 0, 2' @B' ;> ' ;A, ' U ;A' D B;' , , :
0' ;A, ' UB B' ?A,0 ;' U ;A' 0UB =' ,U, 68

"< ;> ,;B2@' < 'A 0B2 :' < ' # D2, =:' , =' < ' #> <FB:' & B22 D;< ' A,=' ;<' =B,2' U ;A' ,' FB,0, ; @' ,2 <0;' ,0' >D,2:' ,0' ;<>DA:' , =' ,0' 0;>HH< ' ' ;AB ' A,; B=' ,0' ;AB' B= ,BE,2' ?<;6' AB@' 0,U' <;A D' 0; , DB' ' ;AB' =B , =' <U' ,=B' ;<' ;AB :' , =' <HB@B=6' AB' = ?>2;@' 2,@' U ;A' ;AB' ;<U 0 <2 ' < ' 2, DB' F2,?B=:' 0>?A' ,0' < H 8,:' A< , :' < ' , ;, B :' UA ?A' 2,@' , ' < ' ;AB' < ; B :' , =' A,=' <;' ;AB' <2=' ; ,= ; < 0' < ' ;AB' FB,0, ; @:' 0 ?B' ;AB' F, , =0' A,=' BEB ' FB B; ,;B=' ;<' ;AB ' =<< 0' 0 ?B' ;AB' 0BEB

T < ; >,; < ' < ' .B ;<;8O' > (' ;' 'R ':5 34 6 6
T *> <> BR8O' 9' '% 'R ':5 3' F6 :'

;BB ;A' ?B ;> @6 B B' ;AB B' U,0 >?A' B?,2? ; , ?B:' ,0 U,0 H>;'
, ;> ,27 ;AB' H> DAB ' A,=' >?A' ;<' ,H, =< ' UAB B' ;AB' FB,0, ;'
A,=' 2 ;;2B6 ! B;:' ,0 UB' 0A,22' 0BB:' ;AB' 0?AB B' U,0?, B=' <>;' '
;AB' B =:' , =' ;A<0B' UA<' 0;,@B=' HBA =' ;<' D BB;' ;AB' " B ?A' ?<>2=' HB' ?<> ;B=' < ' < B' A, =' ' F2,?B0' < ';AB' 0 RB' < ' . RB>:' < H ,:' < ' %B ,6 A,;' , ,;?,2' F,; <; 0 ' UB ;' , ' ;<U, =0' F <Y =>? D' 0>?A' ,' B0>2;' 0' ; >B:' H>;' =<B0' <;' BWF2, ' ;AB' UA<2B' , ;;B G M> ;B' ,0' 0; < D' ,' <; EB' U,0' ;AB' > < D<;;B ' ;,2B' < ' ;AB' A< < 0' ;A,;' A,=' <22<UB=' <>2;80' B ; @' ;<' F< ;<6 <' ;AB' +< ;>D>B0B' ? ; RB 0' ;AB' ,FF <,?A' < ' ;AB' " B ?A' B, ;' F <H,H2B' > =B ' , =' ,FB:' AB ?B' ?, B' ;AB' B,= B00' ;A,;' ;AB@' 0A<UB=' ;<' =BF, ;6 AB B' UB B' BW,DDB ,;B=' > <> 0' ,H <,=' < ' ;AB' >;A2B00 B00' < ';AB' " B ?AG U,0' <;' %< 0< :' ;AB' K' 1 , B;,8' < ' UA< ' 0<' , @' ,; <? <>0' I, =' <0;2@' ,20BJ' 0;< B0' UB B' ;<2=:' <U ' ;<' HB' ' A DA' ?< , =' P

& B22 D;< 80' 0?AB B' < ' ;AB' ??B, D' < ' ;AB' ?< ; @ 0 =B' ' ,?B' < ' ;AB' B B @' A,=' 2< D' HBB ' ;A<>DA;' <>;6 ;' ??>=B=' <;' B B2@' ;AB' BE,?>,; < ' < ' ;AB' ;<U 0' , =' E 22,DB0:' H>;' ;AB' =B0; >?; < ' < ' H =DB0:' 220:' BEB ' <EB 07' ;AB' B <E,2' < ' ,22' , ,20' , =' B, 0' < ';' , 0F< ;:' ;AB' =B0; >?; < ' < ',22' <<= 0;> ' ;A,;' ?<>2=' <;' HB' ?, B=' < :' ;AB' H> D' < ',22' B @ H<,;0' , =' <;AB ' 0 ,22' ? , ;' < ' ;AB' ,E D,H2B' EB 06' K' AB' < B ;' ;A,;' ;AB' B B @' ? <00B0' ;AB' < ; B :8' AB' U <;B' ;<' $B B0 < =:' K ;AB' D<EB < ' < ' ;AB' F <E ?B' < ' #0; B ,=> ,' >0;' HB' ;<2=' ;A,;' ;' 0' B?B00, @' ;<' < =B ' ,22' ?, ;0:' ?, ,DB0:' , =' <;AB ' B, 0' < ' ?< EB@, ?B:' U ;A' ,22' ;AB' F <E 0 < 0' ;AB@' ?, ' ?, @:' ,U,@6 B' <>DA;' ;<' A,EB' ,22' A 0' , , DB B ;0' F BF, B=' < ' < =B D' ;AB ' < ' ,0' 0<< ' ,0' ;AB' " B ?A' ,FF <,?A6 AB' ,F;, 0' 1 < ' ' , =' ;AB ' =B , R,' >0;' HB' F BF, B=' ;<' D EB' ;AB' B B @' ,22' ;AB' <FF<0 ; < ' ' ;AB ' F<UB :' <;' H@' ,00B H2 D' ' 2, DB' H<= B0:' H>;' H@' 2@ D' <>;' ' ;AB' <> ;, 0' , =' ;AB' 0; < D' F, ;0' < ' ;AB' <,=0:' , <@ D' ;AB ' F,; <20' , =' 0 ,22' F, ; B0:' , =' ;B >F; D' ;AB ' ?< > ?,; < 0' A 0' ?< B0' < ' , ' < =B ' < ' "BH >, @' G H@' >D>0;:' UAB ' ,' BU' A, EB0;' A,=' HBB ' D,;AB B=' :' ;AB' M>B0; < ' < ' ;AB' =B0; >?; < ' < ' <<=' 0;> 0' HB?, B' < B' = ?>2;6 AB' FB,0, ; @:' ,0' U,0' ,;> ,2:' FB 0 0;B=' ' A = D' ,;AB ' ;A,

T "< ';AB0B' < ?B 0' , =' ;AB ' =>; B0' 0BB' E<26 6 FF6 6
^ & B22 D;< ';<' $B B0 < =:' . RB>:' "BH6 : :' 2< D' HB < B' ;AB' ,?;>,2' E,0 < 6 :

H> D' UA , ;' ?<>2=' <;' HB' ? , 8 B=' < "6 $@' < B' B , 0' < ' , <;AB ' , ' ?B ; , ' > HB ' < ' ;AB0B' ?< ?B , 2B=' 0;< B0:' BEB ' UAB ' H> B=' ' F ;0' < ' B <EB=' ;<' B <;B' , E B0:' UB B' = 0?T<EB B=' H@' ;AB' " B ?A:' , =' B , H2B=' ;AB ' ;<' F <2< D' ;AB ' F B?, <>0' 0; , @' ' < ;' < ' ;AB' < B0' . B= , 0' 2 B06

0' ;<' ;AB' = 0F2 , ?B B ;' < ' ;AB' F<F>2 , ; < :' & B22 D;< ' ?< Y 0 =B B=' ;A , ;' ' , @' F , ;0' ;' U<>2=' HB' 0 ; ? B ;' ' ;' ;<< ' ;<' ;AB' A 220' < ' ,' BU' = , @0:' UA 2B' ;AB' " B ?A' , @' U , 0' F , 00 D6 0' 2 ; , @' , , DB B ;0' UB B' 0>?A' ;A , ;' AB' ;A<>DA;' ;' F<00 H2B' ;A , ;' ;AB' B B @' U<>2=' HB' , H2B' B ;AB ' ;<' 2B , EB' 0 , 22' F<0;0' HBA =' A :' < ' ;<' , ; , ' A 0' 2 B0' < ' ?< > ? , ; < ' U ;A' F , 6 ;' U<>2=' 0> ?B:' ;AB B < B:' ;A , ;' ;AB' FB , 0 , ; @' ' F , ;0' < ' ;AB' , ' <, =0:' , =' B <;B' < ' 2 , DB' ;<U 0' < ' F< ;0' < ' 0; , ;BD ? , 2' F< ; , ?B:' 0A<>2=' , B' B , =@' < ' ,' B B2@' ;B F< , @' D , ; < 6' AB@' >0;' , 2U , @0:' A<UBEB :' HB' B , =@' ;<' 2 ;' , D , :' ' 8B02 ' ?<2> 0' < ' ;AB' B B @:' , =E , ? D' < ' B; B , ; D:' 0A<>2=' ?< B' B , ' ;AB ' , H<=B06 AB' ;<U 0 <2 ' , =' ;AB' A , H ; , ;0' < ' ;AB' B ; 2B' ?<, 0;' F2 , 0' < ' #0; B 22=> , ' , =' & B0 ; B ' $B , ' UB B' B?< B =B=' ;<' B; B' B ;AB ' ;<' % 0H< ' < ' ;<' F< ;<:' , ??< = D' , 0' ;AB@' UB B' B , B ' ;<' < B' < ' ;<' ;AB' <;AB 6' ;' U , 0' ?2B , ' ;A , ;' ;AB' F <H2B ' < ' BB= D' ;AB ' ;AB B' U<>2=' HB' , ' , ; ;B ' < ' ;AB' (<EB B ;:' < ' = E =>, 20' < ' ;AB' F<< B ' ?2 , 00B0' ?<>2=' <;' HB' BWFB?;B=' ;<' ?, @' < ' ;<' H>@' F <E 0 < 0' < ' , @' UBB 06 B ?B' ;AB B' U , 0' , ' BB=' < ' ;AB' , ??> >2 , ; < ' < ' B 0B' 0;< B0:' <EB ' , =' , H<EB' ;A<0B' BM> B=' < ' ;AB' , @6 AB' +< ;>D>B0B' BDB ?@' = =' UA , ;' ;' ?<>2=:' H>;' ' ;0' >0>, 2' 02 F 0A<=' , =' B ? B ;' , 0A < :' , =' ;AB B' 0' <' =<>H;' ;A , ;' >?A' 0B @' , =' , ' ?B ; , ' , <> ;' < ' 0; , E , ; < ' B22' ;<' ;AB' 2<;' < ' ;AB' > A , FF@' B D , ;06 "< ;> , ;B2@' % 0H< ' , =' F< ;<' UB B' D B , ;' F< ;0' , =' >22' < ' <<=7' H>;' =B0F ;B' < ' ;A 0:' ;AB' F<0 ; < ' < ' ;AB' B >DBB0' HB?, B' =BF2< , H2B:' UAB ' 1 , 00B , ' ; , B=' , ;' , ; , B ' ;U<' < ;2 0' 2< DB ' ;A , ' & B22 D;< ' A , =' ?< 0 =B B=' F <H , H2B6 $>;' ;AB ' 0> B D' U , 0' <;' ' E , 6 ;AB' " B ?A' UB B' 0; , EB=' <>;:' BEB ' ' ;' U , 0' , ' BU' UBB 0' 2 , ;B ' ;A , ' A , =' HBB ' BWFB?;B=6

, E D' =B , 2;' U ;A' ;AB' < D , R , ; < ' < ' ;AB' 2 ; , @' < ?B' < ' +< ;>D , 2:' , =' ;AB' , , DB B ;0' < ' ;AB' =BF<F>2 , ; < ' < ' ;AB' ?<> ; @:' UB' A , EB' 0; 22' ;<' BWF2 , ' ;AB' ;A =' 0B?; < ' < ' & B22 D;< 8' D B , ;' 0?AB B' < ' =B B ?B V ;A , ;' ?< 0 0; D' < ' < ; ?, ; < 06 & B' A , EB' , 2 B , =@' B ; < B=' ;A , ;' 2 B = , ' , =' #2E , 0' A , =' HBB

BF, B=' , =' D, 0< B=:' ;AB' < B ' U ;A' : ' B :' ?< 0 0; D' < ' < B' BD B ;' < ' BD>2, 0' , =' ;A BB' < ' 2 ; ,:' > =B ' ;AB' # D2 0A' DB B ,2' & 22 , ' <W:' ;AB' <;AB ' TH@ : ' B :V ;U<' BD B ;0' < ' BD>2, 0' , =' EB' < ' 2 ; ,:V > =B ' (B B ,2' %B ;B6' AB0B' UB B' ;AB' <>;B ' H>2U, 0' < ' ;AB' B,2 6' , F<' 1 ,@< :' ,' 0 ,22' , =' , ; M>, ;B=' < ; B00:' ,' 0< ;' < ' <>;2@ D' =BFB =B ?@' < ' #2E,0:' U,0' AB2=' H@' < B' 2 ; ,' H, ; ; ,2 < ' > =B ' ,' <2< B2' ,2,@,:' ,' B; B=' B D BB ' < ?B 6' ;' U,0' <;' BWFB?;B=' ;<' , B' ,' 0B <>0' B0 0; , ?B:' H>;' = =' 0<' ' ;AB' ; B' < ' BB=:' , =' =B; , B=' ,' " B ?A' = E 0 < ' HB < B' ;0' U,220' < ' 0< B' F B? <>0' =,@0' ' ;AB' 0F D' < ' :' ;<' ;AB' D B, ;' D2< @' , =' ? B= ;' < ' ;0' D<EB < 6

2@' ;U<' <;AB ' < ' ;AB' , ? B ;' < ; B00B0' < ' +< ;>D,2' UB B' F2,?B=' ' ,' 0; , ;B' < ' =B B ?B:' , =' ,=B' ;<' F2,@' ,' <; ,H2B' F, ;' ' & B22 D;< 80' DB B ,2' 0?AB B' < ' ?AB? D' ;AB' " B ?A6' AB0B' UB B' +B ?AB' , =' H , ;B06' AB' < B ' 0' ,' EB @' 0; < D' 0<2, ;B=' 0B, < ; B00:' < ' ,' F <NB?; D' AB,=2, =' ' ;AB' ;2, ; ?:' < ;@' 2B0' < ;A' < ' % 0H< 6' ;' ?< , =0' 0BEB ,2' D<<=' ? BB 0' , =' 2, = D ' F2,?B0:' 0> ; ,H2B' < ' ;AB' B H, ,; < ' , =' = 0B H, ,; < ' < ' ; <<F0:' , =' 0' B, 2@' F BD ,H2B:' HB?,>0B' < ' ;AB' , <U B00' < ' ;AB' 0;A >0' ?< B?; D' ;' U ;A' ;AB' , 2, =6' +2,?B=' UAB B' ;' 0:' N>0;' ' ;AB' B, ' < ' ;AB' F<0 ; < ' UA ?A' , ' B B @' >0;' ; , B' UA<' 0' B= ; , ; D' , ' , ; ; ,? ' < ' % 0H< :' ;' < B 0' > M>B' <FF< Y ;> ; B0' < ' , D' ?> 0 < 0' < ' A 0' B, ' , =' A 0' ?< > ?, Y ; < 06' 1 < B<EB :' ;' , < =B=' ,' B >DB' , =' ,' 0, B' F< ;' < '=BF, ;> B' H@' 0B, :' < ' , @' 0B?; < ' < ' ;AB' ,22 B=' ; <<F0' UA ?A' DA;' HB?< B' 0<2, ;B=:' , =' HB' F B00B=' ;<U, =0' ;AB' U, ;B ' H@' ;AB' , =E, ? D' B B @6' < B' < ' & B22 D;< 80' < ?B 0' ?< 0 =B B=' ;A, ;' ;' U,0' , ' BEB ' HB;;B ' F2,?B' < ' B H, ,; < ' ;A, ' % 0H< :' ' ;AB' " B ?A' 0A<>2=' F <EB' ;<<' 0; < D:' , =' ;AB' $; 0A' 0A<>2=' HB' ?< FB22B=' ;<' ,H, =< ' +< ;>D,26' AB' < , =B A B ' ;A<>DA;' <;AB U 0B:' H>;' ?, >0B=' ;0' < ; ?, ; < ' ;<' HB' ?, B >22@' B0;< B=:' , =' D, 0< B=' ;' U ;A' ,' F ? B=' BD B ;' < ' 2 ; ,

T * 8 ' H, ' 0, @0' ' A 0' = , @' I * B?6' :' 5J' G !' 0FB?;B=' +B ?AB6' 2 B' 0;A >0' <EB ' UA ?A' ;AB' FB 0>2,' 0' ,FF <, ?AB=' 0' ?<EB B=' U ;A' U, ;B ' , ;' A DA' ; =B:' , =' < ' ;AB'2 B' < ' U< 0' =B0? H D' ,' 0< ;' < ' , ?:' EB @' F<UB >2' ? <00 B0' ,@' HB' B0; , H2 0AB=' >F< ' BEB @' F, ;' < ' ;6' B B', B' B, 2@' ' D<<=' D 0' >F< ' ;AB' U< :' ;AB' H ,00' < B0' B0FB? ,22@' D<<=6' A 0' 0' ;AB' <0;' ,E<> ,H2B' F<0 ; < ' ;A, ;' ?, ' HB' ?< ?B EB=' < ' B H, D' ;AB' $; 0A' , @:' 0A<>2=' ;' BEB ' HB' B?B00, @' ;<' =<' 0<6' AB' ? ?> B B ?B' ,H<> =0' U ;A

#EB ' < B' F< ; , ;' ;A , ' +B ?AB' U,0' H , ;B0:' ;AB' < B' D B , ;' ? <00 D F2 , ?B' < ' ;AB' , D>0' , H<EB' % 0H< ' UAB B' ;AB B' U,0' ,' FB , B ;' H =DB ' , =' BB' ?< > ?, ; < ' H@' D<<=' <, =0' HB;UBB ' $B ,' , =' 2B ;BN<6' ;' 2 B0' , ;' ;AB' F< ;' UAB B' ;AB' <, =' < ' F, ' H@' U, @' < ' (, 0;B22<' $, ?<' ? <00B0' ;AB' <, =' < ' < ;A' ;<' 0<>;A' =<U ' ;AB' +< ;>D>B0B' < ; B :' < ' 2 B =, ' , =' (>, =, ' ;<' #E< ,' , =' #2E, 06' ' E, =B ' UA<' A, 0' , =E, ?B=' ;<U, =0' % 0H< ' ;A <>DA' $B ,' A, 0' ;' < ' A 0' , ' , =' B, :' BM>, 22@' 0<' , ' E, =B ' UA<' A, 0' , =E, ?B=' < ' ;AB' 0, B' <HNB?; EB' < ' $, =, N<R' , =' ;AB' (>, = , ,6' ;' 0' ;AB' , ;> ,2' F< ;' , ;' UA ?A' ;<' <EB' ; <<F0' < ;A' , =' 0<>;A' , 2< D' ;AB' < ; B :' ;A<>DA' & B22 D;< ' A, =' B0; , H2 0AB=' , ' ,2;B , ; EB' ;B F< , @' ? <00 D ' F< ;' , ;' . 22, ' . B2A, :' ;A ;@' 2B0' A DAB ' >F' ;AB' EB :' H@' B, 0' < ' F< ;<< 06' $>;' ;A 0' 0B?< =, @' F, 00, DB' 1 ,0' B < ' ' 0, B;@:' 0 ?B' ;' U,0' <;' F <;B?;B=' H@' ,' < ; B00' 2 B' H , ;B06' =B 0' UB B' D EB ' ;<' H> ' ;AB' F< ;<< 0' ' BEB ' ,' " B ?A'6 < ?B' < ' ;AB' # , 0;' 0A<>2=' ?, B' B, 6' ;' H , ;B0:' < ' ;AB' <;AB ' A, =:' ;AB' H<, ; H =DB' ?<>2=' HB' F>22B=' >F' , =' 0; , ? B=' > =B ' ;AB' ? ;@' U, 220' ' ;AB' BEB ;' < ' , ' , ;; , ? :' , =' = =' <;' BB=' ;<' HB' =B0; <@B=6' AB' ;<U ' 0' 0 ;>, ;B=' < ' ,' 2< ;@' B B ?B' >F< ' ;AB' < ;A' H, ' < ' ;AB' , D>06' ;0' < ; ?, ; < 0' UB B' , ; M>, ;B=' ' 5:' H>;' A, =' HBB ' < ' , @' < ;A0' ' F <?B00' < ' HB D' BH> 2;' , =' 0; B D;AB B=' H@' ;AB' # D2 0A' B D BB ' +, ; ;< 6' & ;A' BU' B, ;AU< 0' , =' B=<>H;0' ;' A, =' HBB ' , =B' ,' 0; < D' F2, ?B:' UA ?A' ?<>2=' <;' HB' ; , B ' U ;A<>;' ,' BD>2, ' 0 BDB' , =' F2B ;@' < ' AB, E@' , ; 22B @6' "2B B' & B22 D;< ' A, =' F2, ?B=' ,' D, 0< ' < ' ;U<' 2 ; ,' BD B ;0' > =B ' ;AB' +< ;>D>B0B' DB B ,2' %<H<:' UA<0B' < =B 0' UB B' ;<' B0 0;' ;<' ;AB' 2, 0;:' , =' ;<' , B' 0> B' < ' H> D' ;AB' H<, ; H =DB:' =<U ' ;<' ;AB' 2, 0;' F2, :' HB < B' 0> B =B D6' AB' " B ?A' BEB ' F>;' A ' ;<' ;AB' ;B0;:' 0 ?B' ;AB@' A, =' < AB, E@' D> 0' U ;A' ;AB :' , =

? BB 0' , =' ?2B ;0' ' ;AB' <? 0:' 0 =B' UA ?A' ;AB B' 0' , 2U, @0' 0 <<;A' U, ;B :' , =' B, 0@' BD B00' < ' H<, ;06' AB@' , B' <>;' < ' ;AB' B, ?A' < ' 2 B' < ' ;AB' , 2, =' 6 =BB=:' ;AB B' 0' 0> ? B ;' << ' ;<' B ?, F' ,' 2, DB' < ?B' FB Y B?;2@' HB@< =' ;AB' , DB' < ' ;AB' B B @6' :' ;' 0A<>2=' HB' ;A<>DA;' U< ;A' UA 2B:' ;A 0' FB 0>2, ' ?<>2=' HB' AB2=' H@' # D2, =:' BEB ' ' +< ;>D, 2' <;AB Y U 0B' UB B' ' ;AB' F<UB ' < ' ;AB' B B @6' AB B' 0' , H> =, ?B' < ' U, ;B 6' ' ;' HB' ;AB' U 0A' < ' %< =' . B22 D;< ' AB' ?, ' B; B' >F< ' % 0H< :' D EB' H, ; ;2B' ' < ;' < ' ;' :' , =:' ' ;AB' =, @' D< , D, 0;' A :' B; B, ;' >F< ' +B ?AB' , =' =B B =' ;' 0< 2< D' , 0' AB' F2B, 0B068

5 ' \ #%%) ( ) 8 ' # +) ' A3 4

;AB B < B' BD, =B=' ;' ,0' A<FB2B00' ;<' ,;;B F;' , ' ,;;,? ' < ' ;AB' F2,?B

2 B =,' , =' #2E,0:' +B ?AB' , =' H , ;B0:' UB B' BD>2, ' < ; B00B0' U ;A'2, DB'D, 0< 06' AB B'UB B:' A<UBEB :' <;AB 'F< ;0' UAB B' & B22 D;< ' < =B B=' < ; ?,; < 0' < ' ,' 2B00' FB , B ;' =' ;<' HB';A <U ' >F:' HB?,>0B' AB';A<>DA;';AB ' < ' 0; ,;B'0; ,;BD ?,2' F< ;, ?B6' AB';U<' <0;' F< ;, ;' UB B' < B' < ' ;AB' < ;AB ' 2 B' < ' ,=E, ?B' UA ?A' ;AB' " B ?A' DA;';, B:' ;AB' <;AB ' < ' ;AB' ?B ; ,2' < ' (,0;B22<' $, ?<' 2 B6' AB' 0;' U,0' ,' 2 B' < ' B=<>H;0' HBA =' ;AB' EB ' 2E,:'N>0;' UAB B' ;'N< 0' ;AB' 1 < =BD<:' <A' B ;AB ' 0 =B' < ' ;AB' H =DB', =' E 22,DB' < ' +< ;B' =B' 1 > ?B22,6' ;' U,0' AB B:' AB' ;A<>DA;:' ;A,;' 1,00B ,' U<>2=' ?A<<0B' A 0' <,=:' ,2< D' ;AB' 0<>;A' H, ' < ' ;AB' 1 < =BD<:' ' AB' , ?AB=' < ' % 0H< ' H@' ;AB' $B ,' 2 B6' $>;' ;AB' 1, 0A,2' <EB=' H@' . RB>:' F, ;2@' I,0' ;' 0BB 0J' HB?,>0B' AB' A,=' AB, =' < ' ;AB' < ; ?,; < 0' < ' ;A 0' =B 2B:' , =' ;AB' U< 0' UB B' BEB ' >0B=6' #M>,22@' > F < ;,H2B' I0<' ;' ?A, ?B=J' U,0', <;AB ' F< ;, ;' 0B B0' < ' B2= U< 0:' ?< 0; >?;B=' ;<' ?<EB ';AB' 2<UB0;' B,?A' < ' ;AB' 3BRB B' ,D, 0;', ' E,=B ' UA<' 0A<>2=' ?< B' H@' ;AB' (,0;B22<' $, ?<' <,=:' , =' 0A<>2=' A,EB' ,0 B=' < ' ;, B ' H , ;B06' A 0' U,0' ,' 2 B' < ' B=<>H;0', =' ; B ?AB0:',2 <0;',' < ; B=' ?, F:' < ' ;AB' B,0;8 H, ' < ' ;AB' EB ' < ' , ?<0' ;<' <FF<0 ;B' 1, ; ?AB2:' H2<? D' H<;A' ;AB' <,=0' UA ?A' 2B,=' < ' (,0;B22<' $, ?<' ;<' #0; B ,=> ,6' 1,00B ,:' ?< D' <;' H@';AB' <>;B' UA ?A' U,0' D>, =B=',D, 0;:' H>;' < ' ,' , =' A< , :' ;<< ' ;AB' 2 B0' < ' 3BRB B' ' ;AB' B, :', =' ;AB@' F <EB=' >0B2B006

2< D' U ;A' ;AB' F B?,>; < 0' ;, B ' < ' ;AB' H, 0' < ' ;AB' 2E,' , =' ;AB' 3BRB B:' ;U<' <;AB ' F B?B0' < ' B D BB D' >0;' HB' B Y ; < B=6' AB' < B:' ;AB' =B0; >?; < ' < ' ;AB' T(' . ' K 2 :V ;AB' <> ;, <,=' UA ?A' 2B,=0' < ' "> =,<' , =' $B2 < ;B' ;<' ;AB' 2<UB ' 3BRB B' U ;A<>;' F,00 D' ;A <>DA' (,0;B22<' $, ?<:V A,0' ,2 B,=@' HBB ' <; ?B=:' UAB ' UB' UB B' =B,2 D' U ;A' ;AB' F<00 H2B' 2 B0' < ' E,0 < ' ' +< ;>D,26' AB' <;AB ' <EB' U,0' ?< 0; >?; EB:' <;' =B0; >?; EB:' ' ?A, ,?;B 6' "< B0BB D' ;A,;' H , ;B0' DA;' HB' ,0 B=:' < ' HB0 BDB=' < ' ;AB' < ;AB ' H, ' < ';AB' ,D>0:', =

K' *8 ' H, ' A,0' ,' 2< D' = 0M> 0 ; < ' < ' 2 6, ;B0' ' A 0' = , @6 ;0' UB, ' F< ;0:' AB'60,@0:' UB B' , ' <>;2@ D' A 22' < ' ;AB' +> AB;B' <,=:' UA ?A' D,EB' ,' ,E<> ,H2B' F<0 ; < ' < ' A<0; 2B' H,;;B B0:', =' ;AB' ,H2B' ,;> B' < ' ;AB' D ,EB22@' 0< 2:' UA ?A' = =' <;' H =' UB22' ' ; B ?AB0', =' <>;U< 06

,22' ;AB' <,=0' ' ;A,;' = B?; < ' ;AB BH@' H2<? B=:' UA 2B' ;' DA;' 0; 22' HB' EB @' F < ;,H2B' ;<' A,EB' BB' ?< > ?,; < ' HB;UBB ' % 0H< ' , =' ;AB' (,0;B22<' $, ?<' BD < :' AB'?,>0B=' ;AB' <,=' ,H<EB' ;AB' 0<>;A' H, ' < ' ;AB' ,D>0:' < ' <FF<0 ;B' H , ;BO' ;<' ;AB' 2@ D H =DB',;' . 22,' . B2A,:';<'HB';A< <>DA2@' B?< 0; ?;B=6' A 0' <>;B:'H@' (,E ,<' , =') R,:' U,0' 0< >?A' B,0 B ' ' ;0' 02<FBO' ;A, ' ;AB'<2='A DA <,=' H , ;?0 ,0;B22<' $ 8, ?<:';A,;:' BEB ' UAB ' ;AB' 2,;;B 'U,0'0, B:' ; <<FO' <E D' < 'B,0;';<' UB0;:',2< D';AB' ,D>0' < ;B ' >0B=' ;' => D' ;AB' BW;' ;U<' @B, 0' < ' ;AB' U, :' ;A<>DA' ;' E<2EB=' ;U<' F,00,DBO' < ';AB' EB ' 0;B,=' < '< B6

$>;' ,22' ;AB' ,;;B 0' < ' B D BB D' A ;AB ;<' B ; < B=' UB B' > F< ;, ;' , =' B B2@' 0>H0 = , @:' UAB ' F2,?B=' HB0 =B' ;AB' < B' D B,;' F B?B' < ' U< ' UA ?A' < B=' ;AB' B@0;< B' < ' & B22 D;< 8O' F2, ' < ';AB' =B B ?B' < ' +< ;>D,26' 0' UA<2B' 0?AB B' =BFB =B=' < ';AB' BW 0;B ?B' < ', ' F BD ,H2B' F2,?B' < ' B >DB:',E, 2,H2B' H<;A' < ' A 0' , @:' , =' < ';AB' B D , ;' F<F>2,; < ' < ';AB' ?<> ; @Y 0 =B' UA ?A' AB' U,0' ,H<>;' ;<' =BE,0;,;B6' B' >0;' A,EB' ,'2 B' < ' UA ?A' ;AB' E,=B ' ?< 2=' HB' ,22@' ?AB? B=' , =' < ?B=' ;<' A,2;' , =' 0;, EB6' ' 0>?A' ,'2 B' A,=' <;' BW 0;B=:' A 0' UA<2B' 0?AB B' U<>2=' A,EB' HBB ' F ,?; ?,H2B:' , =' , ;B ' ,'2<0;' H,;;2B' AB' DA;' A,EB' HBB ' = EB ' ;<' ;A,;' A> B=' B H, ,; < ' UA ?A' ;AB' 0;B 0' ' %< =< ' < B0,U' , =' = B,=B=6' $>;' A 0' B@B' A,=' HBB ' WB=' >F< ' ;AB' D <> =' ' < ;' < ' % 0H< ' BEB ' 0 ?B' A 0' 0B?< =' 2, = D' ' ;AB' +B 0>2,' ' F 2' 5:' , =' ;AB B' AB' ;A<>DA;' ;A,;' ;AB' B?B00, @' 0; < DA<2=' DA;' HB' <> =6' ' >22' @B, ' HB < B' 1,00B ,8O' E,0 < ' AB' A,=' < B=' ;AB' $; 0A' ?,H B;' ;A,;' ;A<>DA' AB' ?<>2=' <;' > =B ; , B' ;<' =B B =' ,22' +< ;>D,2:' K' < ' ;AB' UA<2B'?<> ; @' 0' < ; B :' , =' ;' U<>2=' HB' = ?>2;' ;<' F BEB ;' ;AB' B B @' < ' B ;B D' H@' 0< B' F< ;' < ' <;AB :8' AB' @B;' ?< Y ?B EB=' ;A,;' AB' DA;' F <;B?;' ;AB' B00B ; ,2' F, ;' < ';AB' B,2 :' ;AB' ?,F ;,2:' ,D, 0;' , @;A D' 0,EB' ;AB' <0;' <EB UAB2 D' <==0 6' AB' 0?AB B' A,=' ;, B ' =B ;B' 0A,FB' ' A 0' AB,=' UAB :' < ' ?;<HB ' :' 5:' AB' U <;B' A 0' , <>0' = 0F,;?A' ;<' <2< B2' "2B;?AB :' ;AB' ?< , = D' B D BB ' ,;' % 0H< :' = B?; D' A ' ;<' = ,U' >F' U ;A<>;' =B2,@' ,' 0?AB B' < ' ;AB' ?< 0; >?; < ' < ' ;U<' 0>??B00 EB' 2 BO' < ' ; B ?ABO' , =' B=<>H;0:' ?<EB D' ;AB' UA<2B' 0; B;?A' < ' ?<> ; @' < ' ;AB' ;2, ; ?' ;<' ,' F< ;' < ' ;AB' B0;>, @' < ';AB' ,D>0' ;UB ;@' 2BO' < ' < B' < ;A' < ' ;AB' ?,F ;,26' A 0'

K' "< ';AB0B' E BUO' < ' >D6' , =' BF;6' 5:' 0BB' E<26' 6 F6' P 6

U,0:' ';0' B00B ; ,20:';AB'< =B ' < ';AB'?< 0; >?; < '< ';AB'2 B0'< '
< B0' . B= ,0:' < ';A<>DA';AB' < ;'=B0 D ,;B='=<B0' <;' BW,?;2@'
;,22@' U ;A' ;A,;' >2; ,;B2@';, B ' >F:' ;' < 2@' = B 0' < ' ;' '
F< ;0' < '=B;, 26 "2B;?AB ' 0'= B?;B='; <'0> EB@',' 2 B' < ';AB'
<>;A'< ';AB' ,0;, AB ,'H << ';<';AB' <>;A'< ';AB'3 R, = B:'
, =', <;AB :',' BU' 2B0'HBA =:' < ' 2A, = ,'< ';AB' ,D>0'H@'
$>?B22,0' , =' ,HBR,' =B' 1 < ;B?A M>B' ;<U, =0' 1 , ,6 AB0B'
<>DA2@' BF B0B ;';AB';U<'2 B0'< '=B B ?B'>2; ,;B2@'?< 0; >?;B=:'
;A<>DA' ';AB' B ='; AB'BW; B B' DA;'2, ' U,0'= ,U 'H,? ' < '
;AB' ,0;, AB ,';<';AB' 2A, = ,'0; B, 6 "2B;?AB ' 0';<2='; A,;'
;AB'U< 0'U 22' HB'< ';AB'2, DB0;'0?,2B6 ;AB' < ; B='?, F',H<EB'
< B0' . B= ,0' 0';<'A<2=' : ' B :';AB'U< 0',;' ,HBR,' =B'
1F ;B?A M>B',2< B'U 22' BM> B' : 'U< B ';<'HB'0B;';<'= D'
,;'< ?B7 D B,;'<FB ,; < 0:'0>?A',0';AB'=, D'>F'< ' EB 0', ='
;AB'? B,; < '< ' ,0ABO' , @' 2B0'2< D:', B'0>DDB0;B=6
<U';AB' D B,;'0?AB B'U< B='<>;:' , ='A<U';AB'U< 0'
0;<<='UAB ' 1 ,00B ,8'0'2< D BWFB?;B=', @',;'2,0;',FFB, B='
< ;'< ';AB :'U 22' HB';<2='' ',2,;B '?A,F;B :' ';0'=>B'F2,?B6
> ?B';'AB B';<'0,@';A,;',22';A <>DA';AB'0F D', ='0> B'< '
';AB@'UB B'HB D'> DB='< U, ='U ;A' BEB 0A'A,0;B6
;' >0;' <;'HB'0>FF<0B='; A,;';'U,0', ' B,0@' ,;;B ';<'?, @'
<>;',22';AB0B'F BF, ,;< 06 AB'+< ;>D>B0B'D<EB B ;'B =B='
H@',=<F; D',22'& B22 D;< 8'0>DDB0; < 0 H>;';'U,0' <;'U ;A<>;'
?; < ';A,;' AB',?A BEB='A 0' F> F<0B6 & A 2B' AB'U,0'F2, D'
U< 0',;';AB'EB @'D,;B0'<'% 0H< :', =' , D'F <E 0< 0' < '
;AB'=BE,0;,; < '< 'UA<2B'F <E ?B0' 'E BU'< ';AB' ,FF <,?A D'
E,0 < :' AB'U,0' < ;B ' B;' H@' 0>DDB0; < 0' ;A,;' ;' U<>2=' HB'
F<00 H2B';<'=B B ='; AB'<>;B ' < ; B 0'< ';AB' B,2 :', ='; A,;' A 0'
0?AB B0' UB B' ?,2?>2,;B='; <'= 0AB, ;B ' ;AB' +< ;>D>B0B' FB<F2B:'
,;AB ';A, ';<'B ?<> ,DB';AB ';<',' 'B0 0;, ?B6 AB' BDB ?@:'
< B<EB :' A,='B <>DA' ,; < ,2'F =B';<' B0B ;';AB' U,@' '
UA ?A',' F<2 ?@'U,0'= ?;,;B='; <';AB :'U ;A<>;', @' B B B ?B';<'
;AB ' <U 'E BU0 6 AB'D<EB D'F, ;@' '+< ;>D,2'A,=',??BF;B='
;AB'# D2 0A',22 , ?B'U ;A<>;' B0B EB:'H>;' ;'< ;B 'U ?B='; ,;';AB'
?< 0BM>B ?B0'< ' ;0',?; < 6 AB B'U,0',' E BU',H <,='; A,;';AB'
2 ;;2B' ,; < 'U,0'HB D' 0B;' ';AB' < B < ;'< ';AB'H,;;2B' < '
#> <FB, ' =BFB =B ?B' , 2@' < ';AB'HB B ;'< '(B,;'$;, 6
"< ;> ,;B2@';AB' B < @' < 'C> <;8'0 = ?;,;< 0A F', =' <>2;8'0
,E,DB0'U,0'0; 22' B0A'B <>DA';<'<EB ?< B',22'<;AB ' ?< 0 =B ,

; < 06 < B ;80 B 2B?; < ?< E ?B= & B22 D;< 80 <0; , =B ; ? ; ?0 ;A , ; ;A<>DA ;AB $; 0A @< B DA;0< B; B0 0BB A , =: , @;A D U,0 HB;;B ;A, , B;> ;< " B ?A 0B E ;>=B6 AB BDB ?@ > > B=: H>; ,2U,@0 B =B= H@ @ B2= D: , = 00>B= ;AB B= ?;0 B?B00, @ ;< ?< ,22 ;AB < =B 0 < ; AB DB B ,26

AB 0;,;B < ;AB +< ;>D>B0B D<EB B ; ,; ;A 0 < B ; BM> B0 , U< = < BWF2, ,; < 6 AB < D ,2 BDB ?@ ?< Y B= H@ BU * ,2 @ F2B ; A,= HBB 0< BUA,; ?A, DB= ;0 FB 0< B26 ; U,0 <U , < B > B <>0 H<=@ ;A, , ; ;0 0; 0; ,22,; < 7 < ;AB < D ,2 B HB 0: < 2@ ;AB +,; , ?A I ;< < =B ,0; <: 2,;B H 0A<F < F< ;<J: , = ;AB 1 , M>BR =B 2A,< I" , ? 0?< =B 1 B22< B 1 B BRB0: ;AB < 0;,H2B < 1 < ;B < 1 < : ,0 AB 0 < B BM>B ;2@ ?,22B=J: <U 0> E EB=6 $>; <> BU B HB 0 A,= HBB ,FF< ;B= 6 AB <0; F< ; , ; < ;AB U,0 C<0B ;< < =B 1 B BRB0 B <>0,: DB B ,22@ <U ,0 ;AB K + ? F,2 <>0,:8 , B??2B0 ,0; ? UA< U,0 < B < ;AB H, = < ;A BB <>0, H <;AB 0: UA< < B= ;AB H,? H< B < ;AB , ; " B ?A F, ;@ +< ;>D,26 AB B2=B0; < ;AB : <= D< =B <>0, <>; A<: < =B =B % A, B0: U,0 F B 0;B < ;AB + ?B BDB ; , ; < =B C, B <6 AB ;A = : * < D<0 ;< < =B <>0, <>; A<: , ;B U, =0 < =B =B "> ?A,2: U,0 +< ;>D>B0B 0;B ; %< =< 6 A>0 UAB ;AB + ? F,2 B ;B B= ;AB BDB ?@: ;A 0 H>0@ , = ?,F,H2B , 2@ ?<>2= F>22 ;AB 0; D0 ,2 B , ; <: %< =< : , = % 0H< : ;AB ;B B0;0 < ;AB B2,; < 0 , = =BFB =, ;06 A 0 ;AB@ = = U ;A<>; 0? >F2B , = U ;A<>; ?B,0 D6 * < B0; ? F<A; ?0 +< ;>D,2 A,= ,2U,@0 HBB , ,;;B < , 2@ ,22 , ?B0: ,0 >?A ,0 < F ? F2B06 AB@ F B0B ;B=: =BB=: , ?< 0 =B ,H2B B0B H2, ?B ;<;A<0B < (B, ; $; , = 8 D ;AB & A D =< ,Y ; < < ;AB B DA;BB ;A ?B ;> @6 B ?B ;AB B U,0 ?< 0 =B ,H2B =, DB ;A, ; ;AB F<2 ?@ < ;AB ,22 , ?B ,D, 0;) ,F<2B< DA; HB?< B =B ; B= ;AB B@B0 < ;AB +< ;>D>B0B ,; < U ;A ;AB =< ,; < < ;AB <>0, ,?; < 6 A, ; ;A 0 FB 2 U,0 ,E< =B= U,0 <; ;AB ,>2;6 ;AB@ = = ;AB HB0; ;< BBF , ' F < <; < : ? E 2 , = 2 ; , @: < ;AB <U ,=AB B ;07 AB ?B ?, B ;B Y ,H2B M>, B20 < FB;;@ FB 0< ,2 M>B0; < 0 H<;A U ;A & B22 D;< , = $B B0 < =6 "< ;> ,;B2@ ;AB ;U< 1 , 0A,20 ?<>2= DB B ,22@ DB;; ;AB U,@ ;AB B =: UAB 2, DB ;B B0;0

UB B$, ;$ 0; , B:$ HB?, >0B$;AB$ <>0 , 0$ UB B$ F2B=DB=$;<$;AB$ $; 0A$, 22 , ?B:$, =$ = , B=$ <;$ H B , ' U ;A$;6$ <$ =<$ 0< U<>2=$ A, EB$ H <>DA;$ <;AB ' F<2 ; ? , 0$;<$;AB$ < ;6$ $>;:$ B, UA 2B:$ > B = D$?< ; <EB 0 B0$ U, 0;B=$ & B22 D;< 80$; B$, =$ 0<> B=$ A 0$;B FB 6 < B$;A, ' < ?B$ AB$ 0$ <> =$ U ; D$ ' A 0$ = 0F, ;?AB0$;<$ %< =$ % EB F<<2$;A, ;$;AB$ K$ F, ; B ;:$ B==2 D:$ 0?A BE<>08 T + ? F, 2$ <>DA;$;<$ HB$ D<;$ <>;$ < ' ;AB$ BDB ?@$, =$ F < <;B=$;<$ 0< B$ < B D ' B H, 00@:$ < ' D B, ;$? E 2$ F<0;:$ UAB B$ AB$?<>2=$ =<$ 2B00$ A, 6$ $>;$;AB$ $; 0A$ D<EB B ;$;A<>DA;:$, =$ F <H, H2@$ U, 0$ DA;$ ' ;A D:$;A, ;$;$ U, 0$ HB;;B ' ;<$ HB, ' U ;A$ <U ' BE 20$;A, ' ;<$ M>, B2$ U ;A$;AB$ <>0, ' , 2@:$, =$;AB BH@$;<$ H B, ' >F$;AB$ F < $; 0A$ F, ;@$ ' +< ;>D, 26$ & B22 D;< ' A, =$;<$ B => B$;AB$ + ? F, 28 0 0 , 22$; D>B0$, =$ FB;;@$? ; ? 0 ' ; 22$;AB$ B =6

AB$ <;AB ' B HB 0$ UA<$ B ;B B=$;AB$ BDB ?@$ ' ' UB B$;AB$ < =B$ =B$ B=< =<:$ "B , =<$ 1 , ,$ =B$ <>0, ' <>; A< V$, <;AB ' < ' ;AB$ <>0, ' ?2, V * <?;< ' , @ > =<$) <D>B , :$, ' 2, U$ F < B00< ' < ' ;AB$ ' EB 0 ;@$ < ' < H , ' , = V , ' ;AB$ <0;' Y F< ; , ;$ < ' , 22 V ;AB$ BU2@$, FF< ;B=$ $; 0A$ 1 0;B ' , ;$ % 0H< :$ 1 6$ A, 2B0$;>, ;6$ AB$ < , ; < ' < ' ,$ < B D B ' ;<$ 0>?A$, ' F<0;$;<>?AB=$ +< ;>D>B0B$ F =B$;<$;AB$ M> ? :$, =$ U, 0$ 2<< B=$ >F< ' H@$, 22$ B B B0$ < ' ;AB$ <>0, ' , ?; < ' , 0$, ' , ?;$ < ' 0B , H2B$ UB, B00$ < ' ;AB$ F, ;$ < ' ;AB$ < =B$ =B$ % A, B0$, =$;AB$ + ?B$ BDB ;6$;$ U, 0$?< 0 =B B=$ =<>H; >2$ F<2 ?@$ < ' ;AB$ F, ;$ < ' ;AB$ +B ?BE, 2$, H B;$;<$?< 0B ;$;<$;AB$, FF< ; B ;:$?< 0 =B D$;AB$ < B ?B$ UA ?A$;$ U, 0$?B ; , ' ;<$ D EB6 ' ;AB ' N>0; ?, ; < ' ;$ >0;$ HB$ F2B, =B=$;A, ;$ H<;A$;AB$ + , ; , ?A$, =$;AB$ + ? F, 2$ <>0, ' UB B$ B ' ?, F, H2B$ < ' ?, >0 D$, @$, <> ;$ < ' = ?>2;@$ H@$;AB ' 22 ' ?< 0 =B B=$ F2, 0$, =$;AB ' FB 0< , 2$; D>B0:$, =$;A, ;$, ' ?<22B, D>B$ UA<$?<>2=$ HB$; >0;B=$;<$ BBF$, ' B@B$ >F< ' ;AB ' , ?; < 0:$, =$;<$ <=B , ;B$;AB ' , H ; < 0$ U, 0$ >?A$ BB=B=6 ;>, ;$ U, 0$, ' , ' < ' <=B , ;B$, =$; , ?; >2$ HB, D:$ H>;$?<>2=$ HB

T & B22 D;< ' ;<$ %< =$ % EB F<<2:$ 1 () ' #%(' E 6$ F6$ O P6

T ' , ' < ' UA< ' , 22$ +< ;>D>B0B$ U ;B 0$ 0FB, ' U ;A$ B0FB?;7 BEB ') , F B ' <;B0$ A ' I 6$ PJ$, 0$, ' , ' < ' ; , 2B ;$, =$ = 0? B; < 68$ $>;$ & B22 D;< ' 0BB 0$;< A, EB$ = 02 B=$ A 6$ K$ AB$, = 00 < ' < ' * 6$, @ > =<$) <D>B , ;$;<$;AB$ BDB ?@:$, =$;AB$ B, 0< 0$ < ' A 0$, = 00 < :$ UB B$; >2@$ 2>= ? <>06 6 6 6 A 0$, FF< ; B ;$ 0$;< HB$, D BB, H2B$;<$;AB$ 2<UB ' < =B 0V < ' , < D$ UA< ' AB$ 0$ 0B2B?;B=$ Q 8 I & B22 D;< ' ;<$ A, 2B0$;>, ;:$ B2< ?<:$ >D6 O: 6J

B ;AB ? , <2B= < <EB >2B= ; U , < A 2>B ?B ;AB BDB ?@ ;A , ; & B22 D;< B2 B= <0; < 0>FF< ; ; A < B ; ;AB B UB B ; U< M>B0; < F <?B00 < = 0?>00 < UA ?A B =B B= ; <0; B?B00 , @ ;A , ; ;AB +< ;>D>B0B D<EB B ; 0A<>2= <; HB 2B ; B ; B2@ ;< ; < HB 2B ; B ; B2@ ;< ; <U D> = , ?B , D , =E , ; , DB < ;AB > 2 , FF@ ?< = ; < < F , : , = ;AB UB , B00 < ;AB BU2@ , FF< ;B= BWB?>; EB , ; , = R: ;AB +< ;>D>B0B UB B F B00 D < ;AB B0;< , ; < < 2 EB R , : (<=<@ < 2= ?< M>B0; < : , = < ;AB B?<D ; < < ;AB + ?B00 , 2<; , < F , : ;AB U B < ;AB + ?B < ;AB $, R 20: , ; AB FB 0< B ; ;2B= ;< , ?; , BDB ; < F , => D ;AB ? , F; E ;@ < AB H <;AB , ; . , 2B , @ * < +B= < =B <>0 , <20;B : ;AB +< ;>D>B0B 0;B ; , ; , = R V , 0 , < % A , B , = ;AB + ? F , 2 V U , , ?; EB2@ > D D H<; A ;AB0B =B , = < ;AB F , 0A D<EB Y B ; AB A , = 0>??BB=B= F<0 D ;AB < , 0; , < , = A ?<22B , D>B ;AB B U<>2= A , EB HBB =B0FB , ; B ?; < HB; UBB ;AB , 22 B0 $>; H@ F < 0 D ;AB , ?; EB 0>FF< ; < ;AB +< ;>D>B0B , @ U ;A ;AB F , 0A < ; B 0 V UA ?A AB A , = < F<UB ; < D> , , ;BB: , = UA ?A & B22 D;< A , = , H0<2>; B2@ B >0B= ; < D , ; V ;AB 0;B U< 0< B 0>FF< ; ; , ; , = R # W; , F B00> B U , H <>DA; ; < HB , >F< ;AB F , , = H@ ;AB , 00 D < $, R 2 , ; <<F0 < ;AB <>; A B ?, < ; B : < ;AB 0 =B < < (, =B =< >2 V , <0; > N>0; , H2B , ?; : UA ?A DA; A , EB 2B= ; < , , ?; > , 2 >F;> B: , ; A D UA ?A ;AB $; 0A D<EB B ; U , H<> = ; < F BEB ; H@ BEB @ B , 0 ; F<UB AB < 2@ U , @ ; < F BEB ; , <FB H B , ?A HB; UBB F , , = +< ;>D , 2 U , ; < ?AB? ;AB , ?; E ;@ < <>0 , <20;B : , B = UA ?A ;>, ; <> = >?A = ?>2; @ , ??< F2 0A D: HB? , >0B ;AB <HNB?; < UA ?A ;AB 0;B U , 0 0; E D: , = B0FB? , 22@ ;AB B0;< , ; < < 2 EB R , ; < ; < 2= <U B 0: UB B B ; B2@ , FF <EB= H@ A ?<22B , D>B ;AB BDB ?@ & AB ; ; , ==B= ;A , ; ;AB B UB B > B <>0 <; AB F< ; < ?; < HB; UBB ;AB $; 0A , = ;AB +< ;>D>B0B D<EB B ; 0 V 0>?A , ; AB M>B0; < < BB ; , =B U ;A $, R 2: ;A , ; < ;AB 0>FF B00 < < ;AB 02 , EB ; , =B: , = ;A , ; < ;AB < ; < HB , =<F; B= < ;AB F , @ B ; < ;AB 0>H0 = B0 UA ?A , ; , B= ;AB +< ;>D>B0B , @ V ; 0 B , 0@ ; < > =B 0; , = ;A , ; ;>, ; 0 F<0 ; < < ;AB < ? 2 < BDB ?@ U , 0 < B , 0@ < B B < ; B < > = A 0B2 ; , < ; @ < < B UAB , = 0?>00 < 0; , ; B= AB BM>B ; 2@ A , = ; < , ?M> B0?B

5P & #%%) ( ) ' # +) X

' =B? 0 < 0' UA ?A' AB' = =' <;' , FF <EB:' B B2@' ' < =B ' ;<' , E< =' ?; < ' < ' , ;;B 0' < ' 0B?< =, @' F< ; , ?B6' $>;' ' , ;;B 0' < ' B, 22@' F , @' < B ;' AB' DB B , 22@' 0>??BB=B=' ' DB; ; D' A 0' U, @:' <U D' ;<' ;AB' 0 F2B' , ?;' ;A, ;' +< ;>D, 2' U, 0' =BFB =B ;' < ' (B, ;' $; , ' < ' ;AB' ?< ; >, ?B' < ' AB ' , ; < , 2' BW 0;B ?B6' < 0? <>0' < ' ;A 0:' ;AB' <;AB ' B HB 0' < ' ;AB' BDB ?@' U<>2=' DB B , 22@' @ B2=' ,' B2>?%, ;' , 00B ;' , ;' ;AB' 2, 0;' < B ;:' , =' & B22 D;< 80' F2, 0:' UAB ' 0B;' < ;A' H@' ;>, ;:' ;A<>DA' < ;B ' ? ; ? RB=:' =B2, @B=:' , =' FB=B=:' UB B' ' ;AB' B =' ?, B=' <>;' U ;A' < B' < ' 2B00' ?< F2B;B B006

% & " O O % ! $

" #) + #+) 1) 1 ! "
+ ' (%

) ;AB 0> B ?, F, D < 5 ;AB " B ?A @ < F, A, = B?B EB= A, =2@ , @ B < ?B B ;0 < HB@< = ;AB +@ B BB06 #EB @ , ;A, ; ;AB # FB < ?<>2= , U,0 HB D = B?;B= ,D, 0; >0; , 1 ,@ , = C> B6 $>; UAB & ,D , A, = HBB U< : , = ;AB , 0; ?B < 3 ,@ 0 D B=: , = UAB < B<EB ; ; A, = HBB = 0?<EB B= ;A, ; ;AB $; 0A BWFB= ; < ; <; ;AB 02B < & ,2?AB B BB= <; = , U < , @ F, ; < ;AB @ < (B , @: ;AB # FB < HBD, ; <; ;> A 0 , ; ;B ; < ; <; ;AB +B 0>2, 6 AB , 0; ?B U ;A >0; , A, = HBB 0 D B= < C>2@ G < 2@ 0 W =, @0 2, ;B : < ;AB ;A < ;AB 0, B < ;A:) , F<2B< U,0 ,2 B, =@ 0B2B?; D ; <<F0 ; <0B = ; <; F, : , = BWY F B00 D A 0 ;B ; < < D< D ;AB B A 0B2 ; <K 0A ;AB H>0 Y B00 8 FB 0< $>; AB A, = , =B >F A 0 = ; A, ; ; U,0 ; <<2, ;B ; ;AB @B, < A ; <; , 0F< ; , @ D B, ; ,00 < B ; <; ;AB +B 0>2, ; B < <FB , ; < 0 ;AB , >;> : , = A, = 0B; ;2B= ;A, ; ;AB BWF>20 < < ;AB # D2 0A , = ;AB ?< M>B0; < , = R: BE 22B: , = . ,2B ? , >0; HB =B2, @B= ; <; ;AB 0F D < 6 BF;B HB 4 AB U <;B ; <, FF <EB 9 D C<0BFA8 0 =B? 0 < ; A, ; <>2; 0A<>2= <; HB , 22<UB= ; < , B , @ , ; ;B F; < +< ;>D, 2 ;AB , >;> : , = , < ;A 2, ;B AB , =E 0B= A 0 H <;AB ; <=B B = ;AB 2 B < ;AB , D>0: , = = EB H, ? F, 0A ?> 0 < 0: H>; ; <=B B , 22 < B 0 EB <EB B ;0 ; 22 ;AB B < ?BY B ;0 0A<>2= A, EB HBD> ; <, EB

AB ?< F<0 ; < < ;AB BU , @ ;A, ; U,0 ; <B ;B F, U,0 = ?; , ;B= , > ;B ; <; AB 1 0;B < & , < ?; <HB 4:

! " , ;B0 < ?< , ; B 2, , ?AB M>B E<>0 , ;B0 , B , >W PP^: ^: P^: B; ?6: B; ?6 6 3 (A: % % ' % % T() 5 % ?B2, B F<> , , B > B < ?B =B : A< BO6) , F<2B< ; <2, B: ?A H > : C>2@ 6
) , F<2B< ; <2, B: ?2 = H > : BF; 6 46
^) , F<2B< ; <2, B: B < , =, < 9 D C<0BFA: ?; 6 : 56

5 ' #' " #) ' + #+) ' X :

UA ?A' ;AB' # FB < ' 0; , ;B=' ;A , ;' ;AB' ;<; , 2' < ?B' U ,0' ;<' HB' , H<>;

: ' B :' ??>= D' ;AB' (> , =:' ;A , ;' ;' U ,0' , 22' ;<' HB' < ' ;AB'

<, =0' HB;UBB ' 2B , 0' , =' $, @< B' H@' * B?B HB :' , =' ;A , ;' AB'

0A<>2=' ; , B' ?< , =' ' FB 0< ' ;' , @' HB' <;B=' ;A , ;' ;AB'

; <<F0' =B0 D , ;B=' ' ;A 0' B < , => 'G% % , ?; > , 22@' ;A<0B' UA ?A'

;<< ' F , ;' ' ;AB' ?, F , D ' < ' :' U ;A' ;AB' BW?BF; < ' < ' ;AB'

2=' (> , =:' UA ?A' U ,0' AB2=' H , ? ' UAB ') , F<2B< ' =B;B B=' ;<'

B , ' HBA =:' , =' ;<' 0B =' , 0>H0; ;>;B' ,0' ?< , =B ?A B '

' F , 6' ?B' ;AB' H>2 ' < ' ;AB' B 0B' ?<2> ' U ,0' < 2@'

= B?;B=' ;<' B , ?A' $, @< B' , ;' ;AB' B =' < ' ;AB' @B , :' ;' U ,0' ??2B , ' ;A , ;'

;' U<>2=' <;' HB' U ;A ' 0; D' = 0; , ?B' < ' ;AB' B B @' ; 22'

1 , ?A' 6

* <U ' ;<' ;AB' < ;A' < ' * B?B HB ' 5:') , F<2B< 8O?< B0F< Y

=B ?B' ;BB 0' U ;A' , 22>0 < 0' ;<' A 0' , FF <, ?A D' =BF , ;> B' < ' F, 6'

AB@' UB B' <;' B B2@' ;B =B=' ;<' =B?B EB' ;AB' F>H2 ?:' < ' ;AB@'

<??> ' ' 2B; ;B 0' ;<' A 0' <0;' ; >0;B=' 0;B 0' , =' DB B , 206' & B'

DA;' HB' ?2 B=' ;<' 0>0FB?;' , ' ;B ; < ' ;<' ? , N<2B' ;AB' # D2 0A'

1 0; @' ' ;AB' , D ?B ;' FA , 0B0' < ' ;AB' , == B00' ;<' ;AB' < F0'

%BD 02 , ; ' < ' * B?B HB ' :' UAB ' ;AB' # FB < ' =B?2 , 8B0' ;A , ;' K' ;AB'

< B ;' AB' = 0F2 , @0' A 0B2 ' HB@< =' ;AB' +@ B BB0' ;AB' %B<F , =' '

;B < ' U 22' 0BB ' ;AB' ?B , ' ;<' , E< =' 0A , B:' =B B , ;:' , =:' =B , ;A6'

$>;' H>0 B00' U ,0' ?B ; , 2@' B , ;' UAB ' $B ;A B ' U ,0' , =E 0B=' ;<'

0B =' < U , =' A 0' ? , , DB0' , =' A< 0B0' ;<' 1 , = =:' , =' UAB ' ;AB'

2=' (> , =8O=BF , ;> B' < ' ;AB' < ; B ' U ,0' < =B B=' W' >==B 2@:'

' ;AB' ;A =' UBB ' < ' * B?B HB :' ;AB' , 22>0 < 0' ;<' ;AB' # FB < 8O

FB = D' =BF , ;> B' ?B , 0B6' ;' U<>2=' , FFB , ' ;A , ;' A 0' ?A , DB'

< ' F> F<0B' >0;' HB' , ; ; H>;B=' <;' ;<' ;AB' BU0' < ' ?, ,:'

UAB B' ;AB' 2 , 0;' D B , ;' F, 0A' , @' A , =' FB 0AB=:' H>;' ;<' , '

F> B2@' =< B0; ?' ? , >0B6' ;A 0' U ,0' ;AB' < B ;' , ;' UA ?A' ;AB'

M>B0; < ' < ' ;AB' FB , 2' * E< ?B' ?, B' ;<' F < B ?B6' ;'

U<>2=' 0BB ' ;A , ;' UAB ') , F<2B< ' A , =' ?< ?B EB=' ;AB' =B , ' < ' ;AB'

>0; , ' , , DB:' , =' A , =' 2B , ;' ;A , ;' A 0' < B 0' UB B' 2 B2@' ;<' HB'

, ??BF ; B=:' AB' D , EB' >F' , 22' ;B ; < ' < ' E , = D' F, ' ' ;AB' B , 2@'

0F D' ' FB 0< 6' AB' = E< ?B' U ,0' 0;' < ? , 22@' <<;B=' UAB '

;AB' K' F <;B0;8' U ,0' 2 , =' HB < B' , ' + E@' <> ? 2' < ' * B?B HB ' ^:

T , B' ;<' 0 , B:' ?;6' 4 : 56

') , F<2B< ' ;<' $B ;A B :') <E6' 6

8') , F<2B< ' ;<' 2 , B:' * B?6' 6 1 >;B' < ' ;AB' + E@' <> ? 2' =, ;B=

* B?6' P:' ' ;AB' %() . %

S #' " #) ' #)" #1#)

;AB'K' < F0' =B' B0B EB' =B' 8 BB' =8 22B ,D B8' , =' , ;B U, =0' ;AB' ;A' < F06' ;'A,=' F2,@B=' < 2@' ,'0 , ''F, ;' ';AB'2,;B'U, :' , =' U,0' <0;2@'?< F<0B=' <';AB' BU2@' , 0B=' O;A'H,;;,2 < 0' <' BD B ;0' 0B E D' B20B EAB B6' B?> ;B=' >F' ;<' ,'0; B D;A' < : ' B' H@' ;AB' ,== ;<' <' 0< B' 0; ,@' H,;;,2 < 0' <')<;AB' (B , @:' ;' U,0' ;AB' 0;' <' ,22' ;AB' BU' B < ?BY B ;0' ;<' B,?A' F, ' =BB=:';AB' AB,=' <' ;0'?<2> ' B,?AB=' $> D<0' H@' ;AB' 0;' <'C, >, @:' 6' ;' U,0' ,00 D B=' ;<' ;AB' @' <' +< ;>D,26' $@' ;AB' = , ; D' ,U,@' <' 0< B' <' ;0' O;A'H,;;,2 < 0' ;<'N< ';AB' BD B ;0' ;<' UA ?A' ;AB@',FFB ;, B=' ;'>2; ,;B2@'?, B'=<U ';<',H<>;' : ' B 6

I J')BW;' 'F< ;'<' F< ;, ?B'UB B';AB';U<'=E 0< 0'<';AB' !<> D' (>, =' > =B' (B B ,20' <D>B;', =' *> <>0; B :' B;BB' H,;;,2 < 0:'U ;A';A BB'F <E 0 < ,2' BD B ;0'<';AB'(>, =' ,E,2 @:' B, 2@' : ' B' ',226' AB0B'> ;0'A,=' HBB' < B=' ' 5:' N>0;' ' ; B' <'0< B'<';AB' ';<';, B';AB' 0A, B' ';AB' H2<<=@' =,@0'<' #002 D', =' &,D, 6' AB' # FB <'=' =' <;' , B' ;AB' <EB' ;<';AB' @'<'+< ;>D,2:'H>;' B;, B=';AB' ' $ 0?,@' , ='),E, B:'?2<0B'> =B';AB'+@ B BB06' FF, B ;2@'AB'=02 B=' 0B = D', @'<'A 0' (>, =0'0<, ', B2=',0';<' B =B' ;'= ?>2;';<' =, .';AB' H,?';<'+ , ?B:' ';AB'BEB ;'I> 2 B2@',0' ;'U,0',;'A 0' < B ;J'<' > ;AB' ';<>H2B0' H B, D'<>;' ' B ; ,2' #> <FB6' AB' (>, =' =E 0 < 0'0;,@B=' ' F, ';U<'@B, 0:'H>;'UB B' BEB' ,22<UB=';<'D<', ' < U, =' ;<';AB' ;B < 6

I J' *BBF2@' F B00B=' U ;A';AB'=, DB', =' = ?>2;@'<' BBF D' >F';AB'2 B0'<'?< > ?,;<'HB;UBB' $,@< B', =' 1,= =:' 0 ?B' 1 ,', =' A 0'?<,=N>;<0'A,=' 0B;' ;AB' D>B 22,'U,'<' <<;' '),E, B', =' 2=' ,0;2B:'),F<2B<'A,=' < B=',' ?< F0'UA<0B' 0FB?,2' =>;@'U,0';<'HB' ;AB' BBF D'<FB'<';AB' <,=0:', =';AB' F<2? D'<';AB'?<> ;@0=B'HB;UBB';AB' < ;B', =';AB' F, 0A' ?,F;,26' A 0'U,0'?< F<0B=' <';UB ;@'0M>,=<0'<'8% . %('

,22'EB;B ,0', =' F? B=' B :'B,?A'U ;A',';<;,2'0; B D;A'<'0BEB' < ?B 0', =' '; <<FB 06' AB' =B? BB'<=B D';AB' 0B2B?;<

T C> <;80'< D ,2'?< F0'U,0' B < ?B=' H@';AB' =' <';AB'2 B'IO'H,;;06J' =,U' <';AB'+ >00,'<; B00B0:', =' H@'0< B'> ;0'UA ?A'A,=' A ;AB ;<' HBB'=< D'D, 0<'=>;@'),E, B0B', =' $ 0?,@,' <; B00B0:'UAB B';AB@' UB B' <U' BF2,?B=' H@';AB' !<> D' (>, =6' < D';AB0B'UB B';AB' 0A' $ D,=B' I' H,;;06J', =';AB' + >00,' BD B ;' UA ?A'A,=' < B=';AB' < D ,2'D, 0<'<'+, FB2> ,6

S #' " #) ' #) " #1#)

FB <' 0B;' ,0 =B' <' ;AB' 0F D' ?, F, D' <' :' ;' U,0' ,' 0>FF2B B ;, @' ,== ; <' A

IPJ' AB' # FB <' =B,2;' ' ,' 0 2, ' E,@' U ;A' ;AB' ?,E,2 @' ;AB' BD B ;0' ,2 B,=@' ' F, ' A,=' HBB ' B=>?B=' ;<' ,' 0; B D;A' <' ;U<' <' ;A BB' 0M>,= < 0' H@' ;AB' UB, ' , =' ;B, ' <' B DA;BB ' < ;2 0' <' U, 6 AB' =BF<;0' A,=' <U' D<;' B,=@' ;U<' 0M>,= < 0' ;' <' B2=' 0B E ?B6 A<0B' HB2< D D' ;<' 0 W;BB ' BD B ;0' <' = ,D<< 0:' < D, RB=' ;<' B DA;' F <E 0 < ,2' BD B ;0:' UB B' 0B ;' B, 82@' ;<' ;AB' < ;:' , =' UB B' ,'' ' F, ' H@' C, >, @' 6

I4J' ' ,== ; <' ' ;<' > ;0' 2 B' O;A' H, ;; ,2 < 0' , =' =' , =' O;A' 0M>,= < 0' ,==B=' ;<' ;AB' 0; B D;A' <' B,?A' = ,D<< ' <' , ; @' BD B ;:' ;AB' # FB <' = =' <;' BD2B?;' ;<' 0B =' = , ;0' ;<' 22' >F' ;AB' =BF2B;B=' 0;:' =:' , =' =' H, ;; ,2 < 0' , =' 0;' , =' =' 0M>,= < 06 ' ;AB' B, 2@' < ;A0' <' :' 4: ' B :' ' 0 ,22' = , ;0' <;' , <> ; D' ;<' ;AB' 0; B D;A' <' ,' H, ;; ,2 < ' <' 0M>,= < ' UB B' < U, =B=' ;<' B? > ;' ;AB' <2=' > ;06 AB@' UB ;' < U, =' ' K' BD B ;0' =B' , ?AB:8 UA ?A' UB B' H < B ' >F' < ' B,?A D' ;AB' AB,=' M>, ;B 0' <' ;AB' ?< F0' ;<' UA ?A' B,?A' F, ;@' HB2< DB=6

== D' ;<DB;AB ' ,22' ;AB' > ;0:' U ;A' , ' BW; ,' ,22<U, ?B' < : ' , ; 22B @' < ' ;AB' BU' H, ;;B B0' ;A, ;' ?, B' ' U ;A' C> <;8 0' < F0:' ;AB' (>, =' = E 0 < 0:' , =' ;AB' 5;A' < F0:' UB' DB;' ,0' ,' ;<; ,2' < ' ;AB' B < ?B B ;0' F<> B=' ;<' F, ' HB;UBB ' * B?B HB ' 5:' , =' BF;B HB ' :' ;AB' <22<U D' D> B0G V

C> <;8 0' ?< F0:' , ;' ;0' ,2' 0; B D;A' ' C> B:' , ; @' < 2@' :
! <> D' (>, =' = E 0 < 0666666666

A 0 ;<;,2 , BW?BB=0 ;AB< D ,2 : < UA ?A),F<2B< A,=0F< B ;AB ,>;> <5:H>;0?B ;, 2@ ,;AB HB2<U ;AB ,?;>,2 > HB < B B?B EB= ;< ;AB +B 0>2,7 ;AB D> B < = , ;0: B0FB? ,2: 0 A, =;< EB @6 $>;,0 ;AB ;<;,2 0; B D;A < ;AB @ < F, ;AB ,>;> < 5 U,0 4: B :, = BF;B HB : : B :UA2B ,;2B,0;: A,= HBB 2<0; ;AB ;B E,2 ;AB D> B0?, <; HB ,<>;6

;A 0 ;<;,2: ,0 UB A,EB ,2 B,=@ 0, =: ;AB =: P;A: , = ;A < F0 , = ;AB ; <<F0 > =B 9B22B , , = $< B;<??>F@ D ;AB F <E ?B0< < <: +,2B ? ,: . ,22,=<2 =: , = , ;, =B < B= ;AB @ < +< ;>D,2 ,00 D B= ;< 1 ,00B ,7 AB U,0 ,20<D EB , BW; ,> ,;;,?AB= = E 0 < > =B B ,0^: , = F < 0B= ;AB >0B < ;AB5;A < F0 UAB ;0A<>2= A,EB ? <00B= ;AB +@ B BB06 AB D <00 ;<;,2 < ;A 0 < ?B U,0 1 ,@: UAB ;AB BU < , =B A B A,= ;, B >F A 0 F<0;: ,H<>; : B :< UA< 0< B P: UB B B B?; EB , = ,E, 2,H2B < ,?; EB <FB ,; < 0 ,;;AB < B ;6 B ,0: 9B22B , :, = $< B;UB B; B=<U ;<;AB 2<?,2 =>; B0V ;AB 0;A,= ;< 2<< , ;B ;AB F, 0A ,8 @ < (,2 ? ,: ;AB 0B?< = ;< BBF ;AB F2, 0 < . ,22,=<2 = M> B;: ;AB ;A = ;< A<2= , ;, =B , = IUAB ;U,0 >22@ 0>HY =>B=J ;< B ;B , = <EB > ;AB 0;> ,06 AB : B < ;AB5;A < F0 UB B <;@B;, EB= F, AB ; <<F0 ;AB F <E ?B0 < $> D<0: $ 0?,@: , =),E, B: ;A<>DA <;F2,?B= > =B ;AB 1, 0A,280 ,?;>,2 ?< , =: UB B @B; BW 0;B ?B ;< ?<EB A 0 B, , = A 0 ?< > ?,;< 0 U ;A " , ?B6 ;AB@ , B ,==B= ;< ;AB ;<;,2 < ;AB < ?B UA ?A: = B?;2@ < = B?;2@: U,0 B F2<@B= < ;AB ?< M>B0;< ;+< ;>D,2: 0< B : < B >0; HB ;, B ;<?< 0 =B ,;< 6 $>;: ;A<>DA ;AB@ UB B >0B >2: =BB=

EB , = ,H<EB ;AB< = , @=B,;A ,;B < " B ?A ;<<F0 M>, ;B B= F, : UA ?A U,0 EB @ A DA: UB A,EB ;< ,22<U < ;AB 2<00B0 ,; , , B0: ?, ,: ;AB ?< M>B0;< = ,2>0 ,: ;AB 0 BDB0 < 0;< D,: (B < ,: >=,= <= D<: , = 2 B =,: , = ,22 0 ,22B B D,DB B ;06

A 0 = E 0 < A,=?A, DB < ;AB + <E ?B0 < %B< :3, < ,: , = ,2,Y , ?,: UA ?A UB B <; ,!2 ;, @ D<EB B ;68

<>DA2@: < 1,@ : = < F0 : B :P;A = ;;< : : ;A = ;;< P: : ,E,2 @ B0B EB : :B B?; EB0 F B0B ; > == , 0: HB0 =B0 ;AB 0 ? : UA< ,=B >F ,H<>; : < B: , = 0< B P: B =B;,?AB=6 BB ,H2B0 FFB = W6

;A,;' <;AB 0' UB B' ; D> D' ,D, 0;' A 0B2 T' A<>DA' , <2=' BF>H2 ?, :' UA<' A,=' 0B ' < ' ;AB' , 0' B, 2@' ' ;AB' BE<2>; < , @' U, :' AB' A,=' =< B' A 0' HB0;' ;<' , B' A 0B2 ' ,D BBY ,H2B';<') ,F<2B< 'H@';AB' , ;0' < ';AB' ?<> ; B 6' 2;<DB;AB :' AB' U,0' ,' =B;B0;,H2B' ?A, ,?;B V H>;' AB' U,0' ,' D B,;' DB B ,26' ',22';AB' , 0A,20' < ';AB' # F B' AB' U,0' > =<>H;B=2@';AB' <0;' ?,F,H2B7' * ,E<>0;' , =' <>2;:' U ;A' ,22' ;AB ' ,H 2 ; B0:' UB B' <;' >F' ;<' A 0' 2BEB26' 0' ,' F << ' < ' A 0' H<2= B00' , =' ,F ='0 '' ' 0B R D' , ' <FF< ;> ;@' ;AB' H,;;2B' < ' 3> ?A' 0' 0> ? B ;' ;<' M><;B7' < ' A 0' 0F2B = =' <H0; ,?@' ;AB' =B B ?B' < ' (B <,' ,;' ;AB' ?< B ?B B ;' < ' A 0' ?, BB ' A,0' ;0' F, ,22B2' ' ;AB' 2< D' B => , ?B' HB < B' ;AB' 2 B0' < ' < B0' .B= ,0' ,;' ;0' B =6' 0' HB0;' ;B0; < ,2' 0' ;A,;' &B22 D;< :' UAB ' ,0 B=:' 2< D' @B, 0' , ;B :' UA ?A' < ' A 0' <2=' <FF< B ;0' U,0' ;AB' HB0;' 0<2= B :' BF2 B=' U ;A<>;' AB0 ;,; < ' ;A,;' 1 0 00 ,,' U,0' ;AB' , :' , =' ;A,;' AB' A,=' BEB ' FB ;;B=' A 0B2 ' ;<' ;, B' ' A 0' F B0B ?B' ;AB' 0 0' ;A,;' AB' A,H ;>,22@' ,??BF;B=' UAB ' ?< < ;B=' U ;A' , @' < ';AB' <;AB ' , 0A,20 6

AB' ,; D>B0' < ' ;AB' 2,;B' >0; , ' U, :' ' UA ?A' AB' A,=' H< B' 0>?A' , ' A< <> ,H2B' F, ;:' A,=' ; B=' 1 ,00B ,80' AB,2;A7' ;' U,0' <;' U ;A<>;' = ?>2;@' ;A,;' ;AB' # FB < ' A,=' FB 0>,=B=' A ' ;<' > =B ;, B' ;AB' +< ;>D>B0B' ?, F, D 6' & AB ' AB' 0;' ,00B H2B=' <> =' A ' ,;' ,2, , ?,' ;AB' 0;, 'UA ?A' U,0' ;<' 0B EB' A ' ' ;AB' E,0 < :' AB' ,0;< 0AB=' , =' 0< BUA,;' = 0AB, ;B B=' A 0' < ?B 0' H@' HBD D' A 0' D BB; D0' ;<' ;AB ' U ;A' ;AB' B , :' K' (B ;2B B :' ' , ' AB B' ?< ; , @' ;<' @' <U ' U 0A' 7' ' HBD ' ;<' BB2' @0B2 ';<<' <2=' , =' ;<<' UB, @' ;<' D<' < ' ,?; EB' 0B E ?B6' AB' # FB < ' 0,@0' ;A,;' ' >0;:' , =' BF2 B=' ;<' ;AB' B,0< 0' < ' =B?2 D' ;A 0' F<0;' UA ?A' ' D,EB' A :' H@' 0,@ D' ;A,;' @' BF>Y ;,; < ' U<>2=' 0> ?B' ;<' B =' ;AB' U, 6' ;' U,0' EB @' 2,;;B D' < =<>H;:' H>;' <' , ' A,0' ;U<' 2 EB0' ;<' 2 EB' < ' ;A 0' B, ;A V ;AB' 0<2= B ' 2B,0;' < ' ,22' A<0B' UA<' A,=' 0B EB=' > =B ' ;AB' 1 , 0A,2' ,' BU' @B, 0' H,? :' , =' <U' 0,U' A ' , ;B ' , ' ;B E,2:' B2;';A,;' ;AB B' U,0' ; >;A' ' UA,;' AB' 0, =6' "<@' U <;B' ' A 0' = , @:' K' B' 0' <' 2< DB ' ;AB' 1 ,00B ,' < ' ;AB' 2,0A D' B@B0:' ;AB' <H 2B' ,?B:

T' BB' "<@80' ?< F2, ;0' < ' F6' 0' < 'A 0' H % 3 ' % IB=6' (<=' =B' %8 J' ,0' ;<' ;AB' U,@' ' UA ?A' ;AB' 1 , 0A,2' 0>0FB?;B=' A ' < ' > =B D' A 0' ,E<> ' U ;A' ;AB' # FB < 6

T' BB' %< =' ;, A<FB80' 2% (' ('G '#' '#% 1 : E%' ' M%33 5' ' F6' 6

^ A 0' ?< B0' < ' ,' B@B U ; B00' U ;A' <' D >=DB' ,D, 0;' 1 ,00B ,:' >2<;:' ?< , = D' ;AB' , ; 22B @' < ';AB' ;A' < F06' BB:' A 0' % %('F6' 6

ANDRÉ

MASSÉNA,

DUC DE RIVOLI PRINCE D'ESSLING,

Né à Nice, en 1755,

Mort à sa Terre près Paris, en Avril 1817.

, =' ;AB' ,2B ;' D> B' UA< ' ' BU' ' 455 ' , =' UA<0B' AB,=' ;AB ' B?,22B=' ;<' B' ;AB' H>0;' < ' 1 , >06 B' 0' < 2@' ;@ ;U<:' H>;' 2<< 0' < B' ;A, ' 0 W;@7 AB' A,0' D<;' ;A :' AB' 0' HBD D' ;< 0;<<F7 A 0' 2<< :' 0 ?B' ;AB' ,?? =B ;' UAB ' AB' 2<0;' A 0' B@B' H@' ;AB' # FB < 80' A , =\' A,0' 2<0;' ;0' E E,? ;@6 AB' ;< B' < ' A 0' E< ?B' ,2< B' B , 0' > ?A, DB=68' $>;' ' ;AB' 1 , 0A,280' H<= 2@' E D<> ' U,0' 0< BUA,;' ,H, ;B=:' A 0' U 22' U,0' ,0' 0; < D' ,0' BEB 6' B' BB=B=' ;' ,;' ;A 0'N> ?;> B:' < ' AB' A,=' ;<' ?< , =' 0>H< = ,;B0' UA<' UB B' , @;2 D' H>;' B,0@' ;<' =B,7' U ;A6) B@:' ;A<>DA' , ' A< B0;' , ' , =' , ' ,= ,H2B' 0<2= B :' A,=' ;AB' ,>2;' < ' 0>HY < = ,; < ' ' ;AB' A DAB0;' =BD BB6 B' BEB ' <HB@B=' , @' < B' 0,EB' ;AB' # FB < ' ' ;AB' ; >B' 2 ;, @' ,0A < 6 B' M>, B22B=' U ;A' BEB @' ?<22B,D>B' ;A, ;' AB' B; V <; ,H2@' U ;A' <>2; V , =' A,=' , N <2=' , =' EB @' N>0; ,H2B' FB 0< ,7 = 02 B' < ' 1 ,00B ,6 #EB ' HB < B' ;AB' 2, ;;B ' ,FFB, B=' , ;' ;AB' < ;:' AB' A,=' HBB ' AB, =' ;<' >0B' ;A B, ;B D' 2, D>, DB' ?< ?B D' A 6 C> <;' U,0' ,2 <0;' ,0' H , =7 A,E D' AB2=' ;AB' ?A B ' ?< , =' ' ;AB' 2,0;' +< ;>D>B0B' BWFB= Y ; < ' AB' A,=' ,' 0; < D:' ' ,' 0; , B :' HB2 B ';A, ;' ;' U,0' HB?< D' ;A, ;' AB' 0A<>2=' HB' F2, ?B=' ' ?A, DB' < ' ;AB' 0B?< =6 0' B?< =' B =B B=' ;AB' =B,' ,H0> =:' H>;' ;A 0' AB' U,0' ;AB' 2,0;' ;<' > =B B; , =:' HB D' < ' , ' <EB UBB D' , =' 0B2 ?< =B ;' = 0F<0 ; < 6 B' U,0' 0;>F =' B <>DA' ;<' BD, =' 1 ,00B ,' ,0' A 0' 0>FF2, ;B :' , =' ;<' 0A<U' 0>22B ' B0B ; B ;6 ' ;AB' ;A BB' ?A B 0' < ';AB' , @' ?< F0' ,H<>;' ;<' E,=B' +< ;>D,2:' B@ B ' U,0' ;AB' < 2@' < B' < ' =B?B ;' ;B 0' U ;A' A 0' < , =B A B :' H>;' BEB ' AB' U,0' <;' B? < B=' A 0' B =

1 ,00B ,80' ?A B ' < ' ;AB' 0;, 2+' U,0' " < :' ,' 0? B ; ?' 0<2= B ' , =' ,' , ' UB22' 2 B=' H@' A 0' ?<22B,D>B0' H>;' ;' 0' 0, =' ;A, ;' AB' U,0' <;' 0<' >?A' ' ;AB' 1 , 0A,280' ?< =B ?B' ,0' % B>;6 <2< B2

T "<@:' F6 6 AB' # FB < :' ,' <;< <>02@' H,=' 0A<;:' 2<=DB=' 0< B' FB22B;0' ' ;AB' 1 , 0A,280' 2B ;' B@B' UA 2B' 2B;; D' 2@' ,;' ,' FAB,0, ;6) ,F<2B< ' ;> B=' <> =' , =' ,??>0B=' A 0' , ;A >2' $B ;A B '< 'A,E D' B=' ;AB' 0A<;6 ;AB' + ?B' < ') B>?A, ;B2' U,0' ?<> ; B 'B <>DA' ;<' ; , B' ;AB' H2, B' U ;A<>;' ,' U< =:' , =' ' < ? ,2' A 0;< B0' ,FFB, 0' ,0' ;AB' ?>2F ;' I0BB' B6D6 ?80' ((# ' F6 4 J7 < '<;AB ' <;B0' 0BB' (> D B;:' F6 P 6 & A ,;' 0' <0;' ,0;< 0A D' 0' ;A, ;' 1 ,00= ,' U,0' ?< F2, 0, ;' B <>DA' ;<' , B?;' ;<' H2, B' $B ;A B ' < ' ;AB' = 0,0;B 6

^ BB' ;AB' ,= ,H2B' 0> , @' < ' ,22' ;A 0' ' "<@80' = , @' I (<=' =B' %8 J:' F6 6 1 , H<;' D EBj' ;AB' 0, B' E BU0' ,;' H<;;< :' H>;' U ;A' A 0' >0>,2' BW, DDB ,; < :' , =' U ;A' K' 22>0; ,; EB' , B?=<;B0:8' <??, 0 < ,22@' < ' =<>H; >2' ,??> ,?@6

+B2B;:' ;AB' 0B < ', =B'=B'?, F'< 'A 0'0;, 6' < F2, ;0', B' <> =:' '0< B' < ';AB' 2B;;B 0', =' B < 0' < ';AB'; B:';A,;' 1,00B ,' U<>2=' ;,2 ' ,;;B 0' <EB ' U ;A' +B2B;:', =' 00>B' < =B 0' U ;A<>;' 2B;; D'BEB 'A 0'?A B'< ';AB'0;, ' <U'< 'A 0'?A, DB'< 'F2, '< ' BU' 0F ,; < 6' +B2B;80'<U ' = 0? BB;'0;,;B B ;0'< ';A 0'F< ;' 0BB ';<'N>0; @';AB'?< F2, ;0' ,=B'H@'<;AB 0',D, 0;'A ' AB B'U,0' ?; < :';AB B < B:'BEB 'U ;A ';AB'0;, ' ;0B2:', =' ,22';A,;';AB'1, 0A,2'= =:'< '0, =:'U,0'? ; ? RB='H@'0< B'< ';A<0B' UA<'0A<>2='A,EB'HBB 'A 0'2<@,2'0>H< = ,;B0:'> =B';AB'<; < ';A,;' ;'A,='HBB ' 0F B='H@'<;AB 0:'UA<'UB B',??< =B='," < B' FB B?;'?< =B ?B'H@';AB '?< < '?A B 6' #W,?;' <U2B=DB'< ';AB'=0F>;B0' ';AB'3' '' 'O'A, =';<'<H;, :'HB?,>0B:'UAB ';AB'?, F, D 'U,0'<EB :'BEB @' , '; B='; <' , B'<>;' ;A,;' ;0' , 2> B'A,='HBB '=>B';<';AB',=E ?B'D EB ';<' 1,00B ,'H@';A<0B'< 'UA<'AB'U,0'NB,2<>06' ;' ;AB'H<;;< :'A<UBEB :',22';A 0' ?< ; <EB 0@' 0' <;' EB @' F< ;, ;V;AB B' 0' <' =<>H;' ;A,;';AB' 1, 0A,2'A 0B2'U,0' B0F< 0 H2B'< ',22';A,;'A,='A,FFB B=V' AB'U,0' <;' ;AB' , ';<'HB'2B='H@';AB'<0B'< '<EB FB 0>,=B='H@', H ;<>0'< ' ; D> D'> =B 2 D06

", 2> B'< '0>??B00'0' <;';AB'0<2B'? ;B < '< ' B ;6' 1,00B ,80' ?, F, D 'U,0',' = 0,0; <>0'H>0 B007'@B;'< ' EB0; D,; D' ;AB' = 0,H 2 ; B0' > =B 'UA ?A' AB' 2,H<> B=:' UB' 0A,22' HB' ?2 B=' ';AB'B ='; <' , EB2';A,;'AB' = =' 0< >?A:' <;';A,;'AB' = =' < < B6' AB' > =, B ;,2' B < 'U,0';AB'# FB < 80:'UA<'D,EB' A ';<<'BU' B ' < ';AB'B ;B F 0B'U ;A'UA ?A'AB'U,0'B ; >0;B=6'),F<2B< ' B >0B='; <' ;, B';AB'+< ;>D>B0B'; <<F0' ;<'?< 0 =B ,

T) <;B'+B2B;80'@)% ' '3 ') 5 %.%R ':5 3' B, 2@' < ;@'F,DB0' ';AB' FFB = W';<'H ' %('%3' A:%'%('E<26' WW G' < 'A 0' = 0F>;B0' U ;A' $, < ' " < '0BB';AB'9)% ' '%: ' 3 ' % < ' O 6' +B2B;'0,@O:'D < D' ;AB'?A B'< ';AB'0;, 'B ; B2@:'!'M>8 2' B;, ;' EB0;Q =B'2,'?< A, ?B' #(3:% =>' , B?A,26' M>8 2' , 0, ;'(% 3' ,>F B0' =B'2>' ;<>;'2B' ; ,E, 2' 2;, B'B;' F<2 ; M>B:'M>8 2' = DB, ;'2,'A,>;B'?< B0F< =, ?B',EB?'2B' ,N< DB B ,2' I$B 2A B J' B;'2B0'?AB 0' =B'?< F0:'B;?6:'B;?68' "<' " < 80' ?< F, ,; EB' F<;B ?B'0BB',' 0;< @'< 'F6' 4'< ' 1, H<;80'E<26' :'UA ?A' ,@< ' ,@' <;'HB'; >B VF <H,H2@';AB' < B 6

+B2B;80'U ; D0'D EB','F<< ' F B00 < '< 'A 0'H, F<UB ', =' 2 0'2<EB' < 'BW,?;'; >;A6' B'0,@O:'< 'BW, F2B:' 'A 0'@)% A:';A,;'1,00B ,'A,=' < 2@ O: ' B ' 'A 0', @'< ' E,0 < :'UAB ';' 0'?B ;, ';A,;'AB'A,='PO: 6' BB' $, < ' " < 80' B , 0'< 'A ' '9)% ' '%: ' 3 ' %'C> B' O :'

; < : UAB AB UB DAB= ;AB BB=0 < ;AB BWFB= ; < 6 B BFB, ;B=2@ U <;B ;A, ; K ; U, 0 , H0> = ;A, ; A 0 , B0 0A<>2= HB AB2= ?AB? H@ : < : $; 0A ; <<F0:8 , 0 < ;A D B20B BM> B= ;< HB ; , B ; <? 0 =B , ; < 6 B = = <; B, 2 RB ;A, ; & B22 D;< A, = ;> B= ;AB +< ;>D>B0B BD>2, , @ ;< , =B?B ; DA; D , ?A B: ?, F, H2B < A<2= D H, ? " B ?A = E 0 < 0 2 B < H, ; ;2B V , 0 U, 0 0A< E , ; $>00, ?<6 B A, = <; < B0BB ;A, ; ;AB =B0F 0B= 2 ; , BM> B= ;< HB K ?< ; , B=8 H@ , =BM>, ;B > HB 0 < ; <<F0 < ;AB 2 B < ?< > ?, ; < 06 ; 22 2B00 A, = AB = B, B= < ;AB D B, ; 0?AB B < ;AB =BE, 0; , ; < < +< ;>D, 2: UA ?A U, 0 ;< HB <; ;AB 2B, 0; B B?; EB < ;AB UB, F< 0 < ;0 =B B =B 6 $>; < ;A 0 < B U 22 HB 0, = ;AB F <FB F2, ?B6

% & " O O % ! $)

1) " ") (# (# " (

, ,0 UB A,EB 0BB U,0 < 2@ ,FF< ;B= < , =B A B < ;AB @ < + < ;>D,2 < F 2 4: : , = = = <;,FFB, ; ,; . ,22,=<2 =: ;< ; , B >F A 0 ?A, DB:; 22 1 ,@6 AB ?, F, D A<UBEB A,= HBD> 2< D HB < B > =B ;AB # FB < 80 <U = B?; < 06 AB B UB B F B2 , @ <FB ,; < 0;< HB ?, B= <>;: UA ?A ?<>2= HB 0AB= HB < B B ;AB ;AB BU (B B ,2 A B < ;AB , H<=@ < ;AB B < ?B B ;0 < HB@< = ;AB +@ B BB0 A,= , EB=6 AB0B UB B ;AB BF B00 < < ;AB 0> DB ;H, =0 <) ,E, B: $ 0?,@: , = 2= ,0; 2B: ;AB B0;,H2 0A B ;< ;AB 2 B < ?< > ?,; < 0 HB;UBB ,2, , ?, , = $,@< B: , = ;AB ?,F;> B < ;AB <>;2@ D F, 0A < ; B00B0: 0;< D, , = >=,= <= D<: UA ?A 0B EB= ,0 BW;B ,2 =B B ?B0 < ;AB +< ;>D>B0B < ; B 6 %B0 HB0< 0 B # 0F,D B 0B ; 0>??B00 0:8 U <;B ;AB # FB < B, 2@ ;AB U ;B < 5 2 ,>;=8,H< = > ?< F0 M> 0<> B;;B 2B0 =B B B06 ; , ;B) <EB H B 2 0B , ; F<00 H2B =B B> ;< 0 2B0 <@B 0 ,E, ; => ?< B ?B B ;=B N, E B 6 # ;= , 0 ?B;;B F B0M> B ?< F?B =B < ; ,D B0 2B0 < =0 B;2B0 B DB0 =B N, E B B FB B;; < ; =B B , B68 22 ;A, ; AB ?<>2= =< HB < B 0F D U<>2= HB ;< 0B = < U, = C> <;80 ?< F0: , = ;AB <;AB B, 2 B B < ?B B ;0: ;< F<0 ; < 0 < UA ?A ;AB@ 0A<>2= HB B,=@ ;< 0; B: ;AB < B ;; ;A, ; ;AB B UB, ;AB HBD, 6 & ;A ;AB ?< D < ;AB BU @B, UAB ;AB0B ?< F0 A,= B,?AB= ;AB =B0; B= F<0 ; < 0: ;AB FB ,2 < =B 0 HBD ;< ,H<> = B2,H< , ;B = B?; < 0 < ;AB BW;B , ; < < ;AB D>B 22,0 < ;AB ' FFB # H < , = ;AB ' FFB * <> < < =B 0 UA ?A 2B= ;< >?A , ?A D, = ?<> ;B Y , ?A D < ;AB BU2@ , EB= ; <<F0: H>; ;< 2 ;;2B F ,?; ?,2 B B?; ;AB U,@ < BF B00 < : < 0 22B= 2B,=B 0 2 B 1 ,: ;AB

) ,F<2B< ;< 2, B: ?;6 : 56

^ BB < BW, F2B C, 6 : :;< $B ;A B 7C, 6 :;< 0, B 7 "BH6 :;< 0, B6

P #' 1) ' "' &) (A

, =' < ; B ,0:' H ? B B='U ;A' ;AB' ='< F0' ';AB'= B?; <'<'

, B B0' , ='< B0 <E,0:' U ;A<>;' , @' <;,H2B' ,=E, ;,DB'<'

B ;AB'0 =B6' $>;',0'2< D',0' B@ B'2,@',;'1B =,:', ='1<;B'

DA;', ;', @' < B ;' ?< B' >F' <' BE 22B' ;<' A 0' , =:'

& B22 D;<' B2;'> B,0@',0';<';AB'F<00 H 2 ;@'<',"B ?A',=E, ?B'

HB;UBB' ,D>0', =(>,=, ,:', =:' BD, = D'%,' <, ,0', @'

,0', ' 0> ?B ;'0B?> ;@'<';A 0'0 =B:' <EB=' 22'U ;A',' <?B'

<' : ' B';<'+< ;,2?D B:'?2<0B';<';AB' B,'<'$,=,N<R6' 22'

A,='U ;A' A 0'<U' $;0A'=E 0<:' <U' ?< 0 0; D'<';A BB'

H D,=B0'\', <;AB'=E 0<'?< F<0B='<'+< ;>D>B0B:'> =B'

(B B ,2' , 2;<'';AB'# D2 0A'AB,E@'?,E,2 @'H D,=B'<'2,=B:'

,'UB,'+< ;>D>B0B'?,E,2 @'H D,=B'> =B'1,==B''', ='; A BB'

H,;;B B06' B'U,0'<=B B=' <;';<'?<> ;B , ?B', @'<B 0 EB'

<EB B ;0'<';AB'F, ;'<'%,' < , ,:'H>;';<'0>FF< ;'A :', ='

;<'B =B,E<>';<'?<EB'$,=,N<R:' ';AB'" B ?A'0A<>2='> ;B';AB'

='=';A' <F0:', =' ,B',0B <>0' <EB'UB0;U, =6' AB B'

U,0' <' BB=:',0' ,;;B 0';> B='<>;:'<', @'0>?A'0>FF< ;:'<'

B@ B :';A<>DA'AB'BWB?>;B='0< B' ,;AB'>0B2B00' B ;0', ='

?<> ;B , ?AB0' F 2', =1,@:'> =B ;<<' <;A D'0B <>06'

B'<'A 0'=B <0; ,;<0'=BU' 22';<' <?AB0:'??<0B';<'

#2E,0:'<'1,@' O:'H>;';';> B='<>;';<'HB' B, D2B00:', =';AB'

$;0A';<<F0' B;> B='<';AB '>0>,2'AB,='M>, ;B 0',;'+< ;,2BD B'

,'BU'=,@0'2,;B 6' AB B'0BB 0';<'A,EB'HBB'0< B'> ?B ;, ;@'

<'F> F<0B' ',22';A 0' , <B>E D'<';AB'" B ?A' '#0; B ,=> ,6'

B@ B'U,0' <;'0; < D'B <>DA';<'< B';<'2 DA;'%,' < ,', ='

''?< H B=7' AB' DA;'A,EB'=< B'0<U ;A'D<<='F <0FB?;'<'

0>??B00' '1< ; B'?<>2='A,EB'HBB'0F, B=' <' =,2>0 ,7'H>;'

A,2';AB' ;A' <F0'U,0'>0>,22@'=B;,?AB=' ,';<';AB'0<>;A:'A> ; D'

;AB' 0> DB ;0'<';AB' B ,'=B' < =,:', =';AB'<;AB'A,2'A,='

;<'D, 0<' BE 22B', ='U,;?A' $,',0;B <06' B ?B' B@ B :'2B ;'

;<'A 0B2:'=='<' <B' <';AB'?< <'?,>0B'<';AB'" B ?A' '

F, ';A, '=B;, ' 2280';U<'=E 0<0' ';AB' 2B ;BN<6' A,;'

& B22 D;<'U,0';A>0'<H2 DB='<'=E=B'A 0', @'U,0'<'=<>H;

' 2280'=E 0<:';U<'H D,=B0'0; <D',;,2,EB,'' >D>0;:'A,=' B?B EB='

,';A ='H D,=B' BF;B HB'>=B' ,;2 ',><=:'?< 0 0; D'<';AB'

;A:' O;A:', =' 5;A6

TT < F<0B='<';AB' =:'O;A:' ;A:', ='O;2'BD B ;0:'B,?A';U<'

H,;;,2<0'0; <D:'U ;A'O: 'H,@< B;06

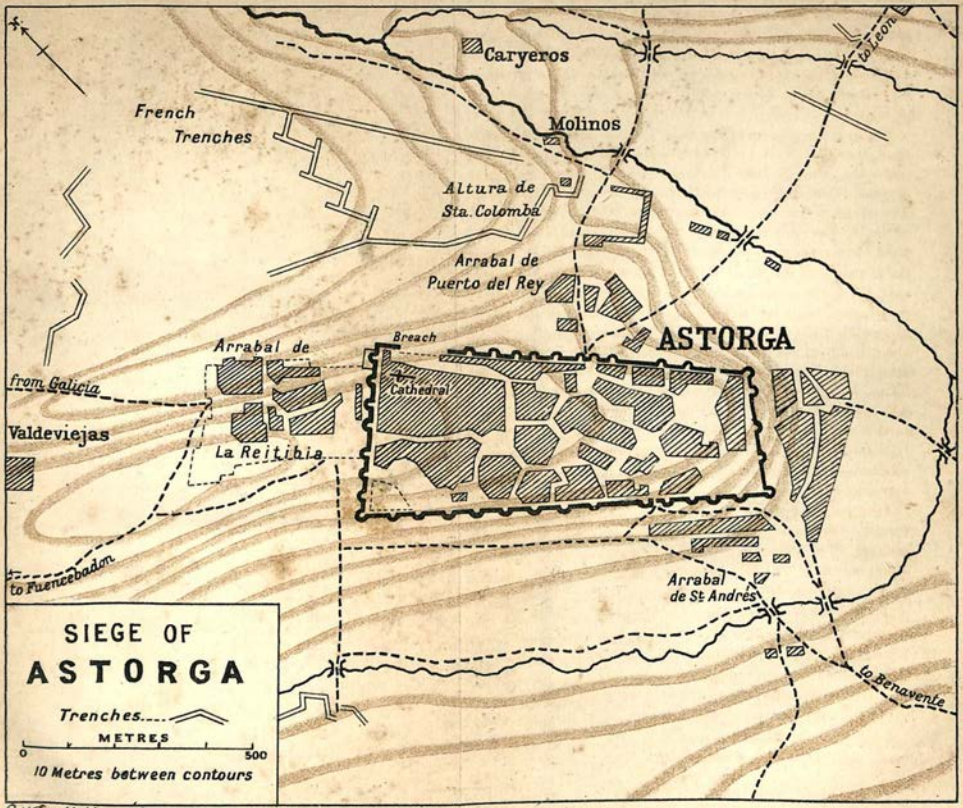
^ 0;', ='O;A'+< ;>D>B0B'?,E,2 @6

,' FB , B ;' D, ' ;<' ;AB' B B @6 @B;' ;AB@' <H;, B=' ;' H@' ;AB' EB @' =<>H; >2' BWFB= B ;' < ' 2B,E D' <;A D' < ' ;AB' ,D>07' ,' F>0A' ' 2B' = B?; < ' < ' +2,0B ? ,' , =' A , ,R' H@' BEB ' ,' 0 ,22' F, 0A' < ?B' U<>2=' A,EB' HBB ' ,' EB @' ; B0< B' , =' ; <>H2B0< B' ,;;B ' < ' 9 D' C<0BFA:' UA<' U<>2=' A,EB' HBB ' < ?B=' B ;AB ' ;<' H D' =<U ') B@' < ' ,2, , ?,:' < ' ;<' ?,22' B@ B ' H,? ' < ' ;AB' (>,= , ,:' < ' 1,= =' U,0' B ; B2@' > ?<EB B=' < ' ;AB' &B0;6' $>;' <;A D' < ';AB'0< ;' A,FFB B=7 %,' < , ,' BF;' A 0' , ' H<=@' ?< ?B ; ,;B=' ' < ;' < ' $,=,N<R:' , =' A,=' ;AB' >22' ,FF <E,2' < ' & B22 D;< ' < ' =< D' 0<6 ;' ;AB' BW; B B' <FF<0 ;B' 2, ' < ' ;AB' " B ?A' < ;:' < ' ;AB' 0A< B0' < ' ;AB' $,@' < ' $ 0?,@:' ;AB B' U,0' D< D' < ' ,;' ;A 0' 0, B' ; B' ,' 0 =B ?, F, D ' ?< =>?;B=' U ;A' ,' >?A' D B,;B ' =BD BB' < ' E D<> :' H>;' BM>,22@' =B? 0 EB' ' ;AB' B =6' AB' 0;> ,0' A,=' HBB ' ,2 <0;' 0; FFB=' < ' ; <<F0' H@' * B2' +, M>B:' ' < =B ' ;<' B < ?B' ;AB' , @' ;A,;' <>DA;',;' , , B0' , =' 2H,'=B' < B06 & AB ';AB' * > B' <EB=' A 0' , ' < ?B' 0<>;AU, =', ;B ' ;AB' 2,0;' , B=' DA;N AB' ?, B=' < ' U ;A' A ' ;AB' = E 0 < ' < '$,22,0;B <0:' UA ?A' A,=' HBB ' ;AB' ?< B' < ' ;AB' <2=' 0;> , ' @6' (B B ,2' ;< <' ?B' U,0' 2B ;' ' ;AB' F ? F,2 ;@' U ;A' 0< B' O: ' B :' UA< ' AB' BF;' ,;' <2< H B0:' HBA =' ;AB' * BH,:' > =B ' (B B ,2' %2, < +< ;B:' U,;?A D' ;AB' " B ?A' < ?B' ' ;AB' F <E ?B' < ' , ;, =B 6') BU' 2BE B0:' 2 ;;2B' < B' ;A, ' : ' 0; < D:' UB B' HB D' ?<22B?;B=' ,;' E B=<6' ' ;AB' B =' < ' C, >, @' (B B ,2' $< B;:' UA<0B' = E 0 < ' ,;' , ;, =B ' A,=' B?B EB=' ;0' = , ;0:', =' A,=' HBB ' 0; B D;AB B=' >F' ;<' 4: ' B ' \';A<>DA;' A 0B2 ' 0; < D' B <>DA;' <' = EB' ' ?B80' UB, ' 2 B' , =' ;<' , B' ,' =,0A' ,;' ;AB' 0;> , ' ?,F ;,26' ' ;AB' ;A' AB' ,;;,? B=' ;AB' 2 B0' < ' <2< H B0:' , =' ?, B=' ;AB ' U ;A' <' = ?>2;@6' ' ;AB' 0;' AB' ?,F;> B=' E B=<:' UA ?A' U,0' BE,?>,;B=' H@' ;AB' ,F;, (B B ,2' ?B' , =' ;AB' 2<?,2' C> ;,' U ;A<>;' 0B <>0' DA; D6' $>;' ;A,;' ,?; EB' F, ; 0, ' C>, ' +< 2 B ' ,;' < ?B' ?>;' < ' A 0' ?< > ?,;< ' U ;A' , ;, =B :' H@' 0B R D' B0;<' , =' (N< 6' $< B;' ,;' < ?B' BE,?>,;B=' E B=<:' , =';> B=' H,? ' ;<' ?2B, ' A 0' B, 6' +< 2 B ' B0?,FB=' ,2< D' ;AB' ?<,0;' ;<' + ,E ,:', =' B, UA 2B' ;AB' , 'H<=@' ' < ';AB' 0;> , 0:' > =B ' (B B ,2' $, ?B ,:' B<??>F B=' ;AB' ?,F ;,26' ,E D' = EB ' < ' +< 2 B :' ;AB' " B ?A' DB B ,2' , ?AB=' UB0;

T B' A,=' 4: 50' B ' U ;A' ;AB' ?<2<> 0:' HB0 =B0' 0 ? ' , =' =B;,?AB=:' A@' ;AB' FB ,2' >0;B ' <220' < 'C, 6' P: :

< ʻ , ʻ BWFB= ; < :ʻ , =ʻ 0>?Aʻ ,ʻ < ?Bʻ U,Oʻ ;<<ʻ 0 ,22ʻ ;<ʻ A,EBʻ , @ʻ F ,?; ?,2ʻ B B?;ʻ < ʻ ;ABʻ DB B ,2ʻ ?<> 0Bʻ < ʻ BEB ;Oʻ ʻ < ;A UB0;B ʻ F, 6

$< B;8Oʻ <FB ,; < Oʻ UB B:ʻ < ʻ ?<> 0B:ʻ UA<22@ʻ 0>H0 = , @7ʻ ;ABʻ B,22@ʻ F< ;, ;ʻ <EB B ;Oʻ ;A,;ʻ UB Bʻ < ʻ <<;ʻ ʻ ;ABʻ B, 2@ʻ 0F Dʻ < ʻ ʻ UB Bʻ ;A<0Bʻ < ʻ C> <;ʻ , =ʻ) B@ʻ ʻ ;ABʻ F2, Oʻ < ʻ %B< 6ʻ ʻ F> 0>, ?Bʻ < ʻ ;ABʻ # FB < 8Oʻ < =B Oʻ ;<ʻ ;ABʻ B B?;ʻ ;A,;ʻ ;ABʻ UA<2Bʻ F2, 2, =ʻ < ʻ %B< ʻ U,Oʻ ;<ʻ HBʻ <??>F B=:ʻ ,Oʻ ,ʻ F B2 , @ʻ ;<ʻ ;ABʻ E,0 < ʻ < ʻ +< ;>D,2:ʻ %< 0< :ʻ UA<ʻ A,=ʻ B B ;B B=ʻ F, ʻ ,;ʻ ;ABʻ AB,=ʻ < ʻ ,ʻ > HB ʻ < ʻ H,;;,2 < Oʻ UA ?Aʻ UB Bʻ >2; ,;B2@ʻ ;<ʻ N< ʻ ;ABʻ ?< FOʻ < ʻ) B@:ʻ U,Oʻ < =B B=ʻ ;<ʻ <EBʻ < ʻ < ʻ . ,22,=<2 =ʻ , =ʻ <??>F@ʻ ;ABʻ ?<> ; @ʻ ,H<>;ʻ $B ,EB ;Bʻ , =ʻ 0;< D,6ʻ Bʻ U,Oʻ 2B ;ʻ BBʻ ;<ʻ 0B2B?;ʻ B ;AB ʻ < ʻ;A<0Bʻ ;<U Oʻ ,Oʻ A Oʻ AB,=ʻ M>, ;B 0:ʻ , =ʻ U,Oʻ = B?;B=ʻ ;<ʻ ?< > ?,;Bʻ U ;Aʻ $< B;:ʻ UAB ʻ ;ABʻ 2,;;B ʻ 0A<>2=ʻ A,EBʻ B ;B B=ʻ ;ABʻ 0;> ,0:ʻ 0<ʻ ;A,;ʻ ;AB ʻ<FB ,; < Oʻ 0A<>2=ʻ ;A B,;B ʻ (,2 ? ,ʻ 0 >2;, B<>02@%< 0< 8Oʻ BWFB= ; < :ʻ A<UBEB :ʻ F <EB=ʻ ,ʻ ?< F2B;Bʻ , 2> B7ʻ ABʻ , ?AB=ʻ ;<U, =Oʻ 0;< D,ʻ B, 2@ʻ ʻ "BH >, @ʻ U ;Aʻ B, 2@ʻ : ʻ B 6ʻ ʻ ;ABʻ ;Aʻ ABʻ ,FFB, B=ʻ HB < Bʻ ;A,;ʻ ;<U :ʻ , =ʻ 2B, ;ʻ ;A,;ʻ 0 ?Bʻ , B8O B?< , 00, ?Bʻ ʻ ?;<HB ʻ 5 :ʻ ;ʻ A,=ʻ HBB ʻ >?Aʻ 0; B D;AB B=6ʻ %, < , ,ʻ A,=ʻ BF, B=ʻ ;ABʻ H B,?ABOʻ < ʻ ;Oʻ B= ,BE,2ʻ U,2206ʻ Bʻ A,=ʻ ;A <U ʻ >Fʻ B ; B ?A B ;Oʻ <> =ʻ ;ABʻ 0>H> Hʻ < ʻ %,ʻ B;B H ,:ʻ UA ?Aʻ <??>F BOʻ ;A,;ʻ F, ;ʻ < ʻ ;ABʻ A 22ʻ < ʻ 0;< D,:ʻ UA ?Aʻ Oʻ <;ʻ ?<EB B=ʻ H@ʻ ;ABʻ ;<U ʻ ;0B2 6ʻ Bʻ A,=ʻ ,20<ʻ B0;,H2 0AB=ʻ <>;2@ Dʻ F<0;Oʻ ʻ ;ABʻ 0>H> HOʻ < ʻ , ʻ = BOʻ , =ʻ +>B ;,ʻ =B2ʻ B@:ʻ UA ?Aʻ 2 Bʻ ,;ʻ ;ABʻ <<;ʻ < ʻ ;ABʻ A 22:ʻ < ʻ ;Oʻ < ;AB ʻ , =ʻ B,0;B ʻ 0 =B06ʻ "<> ;BB ʻ D> 0:ʻ < 2@ʻ ;U<ʻ < ʻ ;AB ʻ F<> =B 0:ʻ ;ABʻ B0;ʻ 2 DA;:ʻ A,=ʻ HBB ʻ <> ;B=ʻ < ʻ ;ABʻ U,2206ʻ ABʻ F2,?B:ʻ ;AB B < B:ʻ U,Oʻ ,ʻ , B 0A ;ʻ < ; ?,;< ʻ < ʻ ;ABʻ <0;ʻ , ; M>,;B=ʻ 0;@2B6ʻ (B B ,2ʻ (, ? ,ʻ .B2,0?<:ʻ UA<ʻ A,=ʻ HBB ʻ 2B ;ʻ HBA =ʻ ʻ (,2 ? ,ʻ U ;Aʻ < Bʻ = E 0 < ʻ < ʻ ;ABʻ <2=ʻ)< ;AB ʻ , @ʻ UAB ʻ * B2ʻ +, M>Bʻ , ?AB=ʻ < ʻ #0; B ,=> ,:ʻ U,Oʻ ʻ ?A, DBʻ < ʻ;A Oʻ F< ; < ʻ < ʻ;ABʻ F, 0Aʻ < ;:ʻ > =B ʻ ;ABʻ 0>FB ;B =B ?Bʻ < ʻ 1 ,A@:ʻ ;ABʻ ,F;, (B B ,26ʻ Bʻ A,=ʻ F2,?B=ʻ A,2 ʻA Oʻ; <<F0 V EBʻ H,;;,2 < 0:ʻ < ʻ :4 ʻ B :ʻ ʻ 0;< D,:ʻ UA 2Bʻ ABʻ A 0B2 ʻ U ;Aʻ ;ABʻ B , =B ʻ 2,@ʻ HB@< =ʻ ;ABʻ <> ;, 0:ʻ ,;ʻ . 22, , ?,:ʻ ʻ ;ABʻ . B R<:ʻ U ;Aʻ ,H<>;ʻ ;ABʻ 0, Bʻ < ?B6ʻ ABʻ ;<;,2ʻ < ʻ< D, RB=ʻ ; <<F0ʻ ʻ (,2 ? ,



A. & C. Black, Soho Square, London, W. 1907

;B ' =B;,?A D' ;AB' =' BD B ;:' UA?A' U,0' < =B B=' ;<' B =B,E<> ' ;<' ?< > ?,;B' U ;A' $< B;' ' ;AB' 0;> ,0:' , =' D, 0< D' 0;< D,' U ;A' ;U<' H,;;,2 < 0:' C> <;' = BU' H,? ' ;AB' D B,;B ' F, ;' < 'A 0' ?< F0' ;<' . ,22,=<2 =' , =' < <6' B' A,=' HBB ' < =B B=' ;<' F2,?B' A 0B2 ' B, ') B@:' ' < =B ' ;<' , =' , =' ?<EB ' ;AB' P;A' < F0' ' ;AB' < ?< D' 0 BDB' < ' >=,=' <= D<6' ;' ;AB' 0, B' ; B' AB' B?B EB=' ;AB' > UB2?< B' BU0' ;A,;' 1,00B ,' A,=' HBB ' , B=' < , =B A B ' < ' ;AB' @' < ' +< ;>D,2:' , =' ;A,;' ;AB' ;A' < F0' U,0' F2,?B=' > =B ' A 0' < =B 06

1,00B ,:' ,0' A,0' HBB ' ,2 B,=@' B ; < B=:' = =' <;' , EB' ,;' ,2, , ?,' ; 22' 1,@' ;A6' AB' ?<>2=' <;' UB22' A,EB' B,?AB=' ;AB' < ;' B, 2 B :' 0 ?B' ;AB' # FB < ' A,=' < 2@' F2,?B=' A ' ' ?< , =' ' F 26' AB' 2< D' =B2,@' ' ;AB' <FB D' < ' ;AB' , ' ?, F, D ' >0;:' ;AB B < B:' HB' 2, =' ;<') ,F<2B< 80' ,??<> ;' ,;AB ' ;A, ' ;<' ;A,;' < ' A 0' DB B ,206' ' AB' A,=' 0>0FB?;B=' ;A,;' BEB @' =,@' < ' U, ; D' B, ;' ;A,;' & B22 D;< ' A,=' ,==B=' , ' BW; ,' B=<>H;' ;<' ;AB' BEB ' D <U D' 2 B0' < ' < B0' . B= ,0:' ;' 0' FB 00 H2B' ;<' HB2 BEB' ;A,;' AB' U<>2=' A,EB' A> B=' < U, =' ,;;B 0' ,;' ,' 2B00' 2B 0> B2@' F,?B6' $>;' A 0' =B;B ,;< ' ;<' ?< =>?:' ;AB' E,0 < ' < ' +< ;>D,2' ' UA,;' AB' ?,22B=' K' ,' B;A<= ?,2' 0A < '8' 0' 0> ? B ;2@' 0A<U ' H@' ;AB' < =B 0' 0B ;' ;<' ,2, , ?,' < ' 1,@' 56' K B22' ;AB' + ?B' < ' #002 D' ;A,;:' ,??< = D' ;<' <> ' # D2 0A' ;B22 DB ?B:' ;AB' , @' < ' (B B ,2' & B22 D;< ' 0' ?< F<0B=' < ' <' < B' ;A, O6 ' $; 0A' , =' (B , 0:' , =' ;A,;' A 0' +< ;>D>B0B' , B' < 2@ 6 ' 0; < D6' ' =<' <;' U 0A' ;<' B ;B ' % 0H< ' ,;' ;A 0' < B ;:' HB?,>0B' ' ?<>2=' <;' BB=' ;AB' ? ;@:' UA<0B' B 0B' F<F>2,; < ' 0' ,??>0;< B=' ;<' 2 EB' < ' 0B, H< B' <<=6' B' ?, ' 0FB =' ;AB' 0> B ' < ;A0' ' ;, D' >=,=' <= D<:' , =' ;AB ' 2 B =,6' B' BB=' <;' A> @:' H>;' ?, ' D<' B;A<= ?,22@' ;<' U< 6' AB' # D2 0A' DB B ,2:' A,E D' 2B00' ;A, ' : ' ?,E,2 @:' ,@' < B ' H,;;2B' < ' D <> =' UAB B' ?,E,2 @' ?, <;' ,?;:' H>;' U 22' BEB ' ?< B' <>;' ;<' DA;' ' ;AB' F2, 0

AB' # FB < ' ;AB ' F <?BB=0' ;<' ,==' ;A,;' U ;A' ;AB' P : ' B ' < ' ;AB' P;A' , =' ;A' < F0:' ;AB' ?,E,2 @' B0B EB:' e?6:' 1,00B ,' 0' 0; < D' B <>DA' ;<' ;, B' H<;A' <= D<' , =' 2 B =,' ,;' A 0' B,0B7 B@ B ' , =' ;AB' =' < F0' ?, ' HB' ?,22B=' >F' ;<' ;AB' H =DB' < ' 2?, ;, ,:' < ' UAB ?B' ;AB@' ?, ' B ,?B' B ; ,2' +< ;>D,2' , =' ?<EB ' 1,= =6') <' < =B ' 0' D EB ' ;<' H D' >F' ;A 0' ?< F0'

K'),F<2B< ' ;<' $B ;2 B :' 1,@ 5: 6

,'

, B' A,=' <;' F2,@B=' ;0' F, ;' ' ;AB' = ?>2; BO' B ?<> ;B B=' H@' ;AB' " B ?A6) < ' =<BO' ;' 0BB ' ;A, ;' , ' BW,DDB ,;B=' BO; ,;B' < ' ;AB' B B @8O' 0; B D;A' =>?B=' A ' ;<' F<0;F< B' ;AB' ,;;,? ' ; 22' ,22' ;AB' B < U B ;0' A,=' , EB=6 B' > =B BO; ,;BO' & B22 D;< 8O' $; 0A' ; <<F0' H@' 0< B' : :' A 0' +< ;>D>B0B' ; <<F0' H@' ,;' 2B,0;' : ' B 6 B' 0' >;;B 2@' D < , ;' < ' ;AB' U< 0' < ' < BO' .B= ,0:' ;A<>DA' 0 W < ;A08' 2,H<> ' A,0' ,2 B,=@' HBB ' 2,E 0AB=' < ' ;AB :' , =' H@' ;A 0' ; B' ;AB@' UB B' ,2 B,=@' =B B 0 H2B6 A 8BB' < ;A0' 0BB ' , ' ,2;<DB;AB ' BW,DDB ,;B=' ; B' ;<' =BE<;B' ;<' ;AB' 0 BEBO' < ' ;AB' ;U<' 2 ;;2B' <2= ,0A < B=' 0B?< = ,;B' < ; B00BO' < ' >=,=' <= D<' , =' 2 B =,6 " < ' UAB ?B:' ;AB :' ?< BO' ;A 0' > F B?B=B ;B=' BO<2EB' ;<' ,=<F;' ,' K B;A<= ?,28' 0@0;B ' ' =B,2 D' U ;A' ;AB' E,0 < ' < ' +< ;>D,2' Z ;' A,0' HBB ' 0>DDBO;B=' ;A,;' ;AB' # FB < ' U,0' EB @' =BO <>0' ;<' , B' 0> B' < ' ;AB' ,H0<2>;B' 0>FF B00 < ' < ' ;AB' D>B 22B <0' < ' ;AB' +@ B BBO' , =' ;AB' #H <:' HB < B' F>0A D' < U, =' A 0' B2=' , @' ;<' % 0H< 6 +<00 H2@' AB' U,0' 2>B ?B=6H@' A 0' <U2B=DB' < ' ;AB' ;B' = ?>2;@' ;A,;' 1,00B ,' U<>2=' =' ' BM> FF D' A 0B2 ' U ;A' ,' ; , :' , =' < B' B0FB? ,22@' ' ? B,; D' ,D,R BO' => D' ;AB' < ;A0' HB < B' ;AB' A, EB0;' A,=' HBB ' D,;AB B=' 6 < B' A,EB' ;A<>DA;' ;A,;' 2<< D' , ' < U, =:' AB' ?< 0 =B B=' ;' U<>2=' HB' < B' = 0,0; <>0' ;<' ;AB' # D2 0A' , @' ;<' HB' K = EB ' ;<' ;AB' 0B,8' 0< BUAB B' ' ;AB' <>DA' < ;A0' < ' ?;<HB ' , =') <EB HB ' ,;AB ' ;A, ' ' ;AB' B' UB,;AB ' < ' C> BV , =' > =<>H;B=2@' <' < B' UA<' B,=0' A 0' = 0Y F,;?AB0' ?, ' =<>H;' ;A,;' ;AB' =BO B' ;<' =B,2' , ' ,H0<2>;B2@' ? >0A D' H2<U' ;<' ;A,;' , @' U,0' A 0' =< ,; D' =B,' ;A <>DA<>;6 $>;' F <H,H2@' ;AB' , ' =B;B D' ,?;< ' '),F<2B< 8O' =' U,0' ;AB' BO<2EB' ;A,;' ;AB B' 0A<>2=' HB' <' , 2> B' ;A 0' ; B:' < ' U, ;' < ' F BF, ,; < ' < ' U, ;' < ' 0> ? B ;' 0; B D;A7 ;A,;' <' 0 0' 0A<>2=' HB' ;, B :' , =' ;A,;' UA,;' AB' BD, =B=' ,0' , ' <EB UAB2 D' < ?B' 0A<>2=' HB' 2,> ?AB=' >F< ' +< ;>D,26 ;B ' C> <;8O' = 0,0;B ' < ' ' , =' <>2;8O' ,0?<' ' 5:' ;AB' FB ,2' F B0; DB' ?<>2=' <;' 0;, =' ,' ;A =' , 2> B6 AB' <2=' F2B=DB' ;A,;' K ;AB' 2B<F, =' 0A<>2=' HB' = EB ' ;<' ;AB' 0B,8' >0;' HB' B=BB B=' ,;' ,22' ?<0;0' < ' ;A 0' <??,0 < 6 <2 =' 0>??B00' ,;AB ' ;A, ' ,' H 22 , ;' ?, Y F, D ' >0;' HB' ;AB' B =' BF;' ' E BUG AB ?B' ?, B' ;AB' B2,H< ,;B' F BF, ,; < 0' < ' ;AB' 0>0;, D' < ' 1,00B ,8O' ,=E, ?B' H@' ;AB' 0>FF< ;' < ' * <>B;:' 9B22B , :' , =' B ,06 #EB ' >?AB;8O' <FB ,; < 0' ' #,0;B ' F, ' UB B' ;<' HB' ?< =>?;B=' U ;A' 0< B

% & " ' O O N ' % ! $ ')

' 1) ' " ' &) (6 # ' # (# ' " ' ' * *
* (

% " ' 2< D ' < ;A0 < ' =B2 , @ ' ;A , ;' <22<UB=' ;AB ' 0;' <FB , ; < 0 ' < ' ;AB ' " B ?A ' ' UB B ' , ' ; B ' < ' , W <>0 ' U , ; D ' < ' & B22 D ;< 6 ' B ' A , =' <EB=' A 0 ' AB , =' M> , ;B 0 ' ;<' . RB>' < ' ;AB ' ;A ' < ' C , >, @:' , =' A , =' HBB ' 2@ D ' ' ;A , ;' H2B , ' , =' 2< ;@ ' ;<U ' , 22 ' ;A <>DA ' ;AB ' B0;' < ' ;AB ' U ;B 6 & ;A ' A ' ;AB B ' A , =' ?< B ' ;<' ;AB ') < ;A ' , 22 ' ;AB ' <2=' $; 0A ' = E 0 < 0 ' 0 , EB ' ;AB ' =:' UA ?A ' A , =' HBB ' 2B ;' U ;A ' 22:' 0;' , ;' H , ;B0 ' , =' ;AB ' , ;' +< ; , 2BD B:' ;<' U , ;?A ' ;AB ' " B ?A ' HB;UBB ' ;AB ' , D>0 ' , =' ;AB ' (>, = , , 6 AB ' 0;' * E 0 < ' U , 0 ' F2 , ?B=' , ;' . RB>:' ;AB ' =' , ;' , ?<0<' , =' ;AB ' B DAH<> D ' E 22 , DB0:' ;AB ' O ;A ' , ;' (>, = , :' UA 2B ' ;AB ' ? , E , 2 @ ' U ;B B=' ' ;AB ' ?<, 0;' F2 , ' HB;UBB ' < H , ' , =' EB <6 2@ ' ;AB ' % DA ;' $ D , =B ' < ' <HB ;' , > > =:' UA ?A ' ; , B0 ' ;AB ' BU ' 0;@2B ' < ' ;AB ' % DA ;' 1 2 (' < ' 1 , ?A ' :' U , 0 ' F>0AB=' < U , =' ;<' ;AB ' F , 0A ' < ; B :' , =' 2 , @ ' ' ;AB ' E 22 , DB0 ' , H<>;' 2 B =, :' U ;A ' ;0 ' <>;F<0;0 ' F>0AB=' < U , =' ;<' ;AB ' 2 B ' < ' ;AB ' D>B=, 6 AB ' +< ;>D>B0B ' BD>2 , ' H D , =B0:' UA ?A ' UB B ' , ;B U , =0 ' ?< F< , ;B=' ' ;AB ' $; 0A ' = E 0 < 0:' UB B ' 0; 22 ' 2@ D ' ' U ;B ' M> , ;B 0 ' , <> =' < H , ' , =' A< , :' = 22 D ' A , =' , =' ?< F< , ; D ' ;AB ' B? > ;06 AB ' 2 ; , ' UB B ' , 20<' > =B ' , 0 ' , ;' ;AB ' BD B ; , 2 ' AB , =' M> , ;B 0:' 0 , EB ' ;AB ' BU ' H , ; ; , 2 < 0 ' UA ?A ' A , =' , 2 B , =@ ' HBB ' ;A <U ' ;<' #2E , 0:6
2 B =, :' +B ?AB:' , =' H , ;B06
& B22 D ;< 8 0 ' < ;:' , ? D ' ;AB ' " B ?A:' U , 0 ' < B=' H@ ' 228 0 ' ?< F0 ' ' ;AB ' 2B ;BN<:' %B?< 8 0 ' +< ;>D>B0B ' H D , =B ' ' ;AB ' , 0 ;B22<' $, ?<' = 0; ?;:' , =' , > > =8 0 ' < ?B ' < ' ;AB ' D>B=, 6
) B ;AB ' 22 ' < ' %B?< ' U , 0 ' ' , ?;>, 2 ' ?< ; , ?;' U ;A ' ;AB ' B B @:' , =' % , ' < , , 8 0 , @:' 0F B , =' <>; ' < ' ;AB ' + , 00 ' < ' +B , 2B0 ' ;<

N ' AB ' AB , =' M> , ;B 0 ' < ' ;AB ' O =' => D ' C , >, @ ' , =' "BH >, @ ' UB B ' , ;' . , 2EB =B:' , H<EB ' ;AB ' <, :' ;A<0B ' < ' ;AB ' P =' , ;' + AB2:' ;A<0B ' < ' ;AB ' 5 ;A ' , ;' . 22 , ' < F 6

$ & 9 $ % $ + $ @

DB B ,2 < 9?B 06 2@ U ;A ,> > =: 22: $B B0 < =: = = AB BEB ? ?< =B0?B = ;< B ;B ; < BWF2, ,; < 0 , = 0; , ;B B,0< 06 AB B0; B?B EB< =B 0 U ;A<>; ?< B ;: UA ?A ;AB@ , B = B?;B= ;< ?, @ <>;: , = , B D EB < <FF< ;> ;@ ;< = 0?>00 6 AB = B B ?B U,0 <;B= , = B0B ;B= H@ ;AB <;AB 80 6 UAB < 1 , ?A ;A ,> > = U,0 < ,22@ D EB ?A, DB < ;AB UA<2B <>;F<0; 2 B < ;AB , @: , = A 0 0B < 0 + ?;< , = <2B UB B ;<2= ;< ?< < ;AB <EB B ;0 ;< A 0: U ;A<>; U, ; D < < =B 0 < AB, = M>, ;B 0: 0< B ?; < U,0 B DB =B B= 6 + ?;< , = ,> > =: B0FB? ,2: UB B < ;AB B0; < ;AB ?, F, D , ; 0; , ;B < 2, ;B ; A<0; 2 ;@: UA ?A < B ;A, < ?B 2B= ;< A DA U< =0 UAB ;AB@ B; V , , ?; UA ?A E,0 <; U ;A<>; ;0 =, DB 0 ;< ;AB UB2 , B < ;AB , @

AB ?B2BH , ;B= ?< , =B < ;AB % DA; * E 0 < U,0 , ; ;A 0 ; B UB22 <U < A 0 , H 2 ;@: H>; B? < B= , ;AB , > 2>? @ 0<2= B 6 B A, = B ;B B= ;AB , @ 0< , H, ? , 0 445: , = A, = 0BB 0B E ?B BEB @ M>, ;B < ;AB D2<HB: @B; 5 U,0 < 2@ , ?<2< B26 A 0 U,0 ;AB < B ,0;<> = D 0 ?B AB U,0 < B < ;AB BU 0? B ; ? 0<2= B 0 ;AB $; 0A , @ UAB ;AB BE<2>; < , @ & , H < B <>;6 B A, = 0FB ; 0< B ; B , ; $B 2 4 : 0;>=@ D ;AB ; , ?; ?0 < ;AB , @ < " B=B ?

) <;B B0FB? ,22@ & B22 D;< 80 BWF2, , ;< @ = 0F, ;?A ;< , > > = < 1 , ?A : UAB B AB BEB D<B0 0< , ,0 ;< D EB A 0 0>H< = , ;B , BB A, = ,0 ;< ;AB ?A< ?B < A 0 2 B 6 K ! <> >0; HB , HB; ;B N>=DB < ;AB =B; , 20 < ;A 0 M>B0; < ;A, ? , HB: , = U 0A @<> ;< ?< 0 =B ;AB : < =B ;< HB , H2B ;< ?, @ ;AB F2, ;< BWB?>; < UAB 0A,22 0B = ;< @<>68 , <;AB 2B; ;B & B22 D;< U ;B0 6 !) <;A D ?, HB < D B, ;B , =E, ; , DB ;< B ;A, ;< A, EB ;AB HB B ; < @<> <F < < ; 0>HNB?; 68 8 K ;B = ;A, ; ;AB = E 0 < 0 < (B B ,20 <2B , = + ?;< 0A<>2= 0>FF< ; @<> < ;AB <, : U ;A<>; U, ; D < < =B 0 < B: ; ; 0A<>2= HB B?B0Y 0, @: , = ;AB@ 0A, 22 HB = B?;B= , ??< = D2@68 ;A 1 , ?A: < . RB>6

; 0A<>2= <; HB < D<; ;B ;A, ; + ?;< : < 2B00 ;A, , > > =: U,0 , ; ;A 0 ; B 2 E D =<U , <2= = 0, 0; B 6 $>; + ?;< 80 0 < ;> B A, = <; HBB 2 ; , @6 ; U,0 ;AB ?B2BH , ;B= ?, 0B < I %6 E6 R ' B A, = HBB ; B= < FB ; ; D ;AB >0B < ;< ;> B ; < BW; , ?; BE =B ?B , D, 0; ? , 20 UA 2B D<EB < < ;AB BU2@ ?< M>B B= 02, = < = , =: , = ?< E ?; B=: ;A<>DA F, 0A 2, U IUA ?A U,0 0; 22 < ?B = , =J , FF, B ;2@ FB ; ;B= < ;AB F , ?; ?B6 ;B ;A 0 + ?;< U,0 , , B= , 6 8 AB 0;< @ < % > 0, , 2=B < : ;AB M>, = << D 2 UA< A, = HBB ; ;< ;> B= H@ K F ? B; D:8 A, = HBB , FFB, D ;B ; ;B ;2@ ;AB ?<2> 0 < BEB @ & A D F, FB < < B ;A, ; ;A BB @B, 06

S ' " ' *' ! # 1' "' ' + 4

< ' F<00B00 D:' U ;A' A 0' D B,;' ,H 2 ; B0' , =' B B D@:' > ?< < ' H<= 2@' 0; B D;A:' 0<' ;A,;' AB' ?<>2=' B , ' < ' A< 0BH,? ' ,2 <0;' , @'2B D;A'< ' ; B6' 6 66' & AB ' A 0' <FB ,; < 0'HBD, :';AB'F< ;' ;<' HB' <H0B EB=' U,0' ;AB' 2 B' < ' ;AB' D>B=,:' BW;B = D' < ' 0< B' < ;@' 2B06 AB' ?<> ; @:' ,2;A<>DA' EB @' BD>2, ' ' ;0' 0> ,?B:' U,0' M> ;B' <FB ' ,=' > B ?2<0B=:', =' ;' ,2 <0;' BEB @Y UAB B' < ' ;AB' ,?; < ' < ' ,22' ;A BB' , 06' 1 B ' AB' ;<< ' >F' ;AB'2 B' AB' BF;' A 0' , ; @' H,? ' B ; B2@:' U ;A' ;AB' BW?BF; < ' < ' <> ' ?< F, B0' < ' ;AB' 2B0' ,H<EB' ;AB' H =DB' < ' $, H,' =BZ' +>B ?<:' >F< ' ;AB' 3 :3 ' ' < ' ;AB';' B' ;A,;' U<>2=' HB' BM> B=' ;<' B; B' ;AB' , ; @' HBA =' ;AB' <,:' , ;B ' AB' B?B EB=' < ,Y ; < ' < ' ;AB' ?,E,2 @' < ' ;AB' B B @80' ,=E, ?B6' ' UB' ,TB F <FB 2@' ;<' > =B 0; , =' ,> > =80' <FB ,; < 0:' ;AB' 3 :3 ' ' >0;' BEB ' HB'2<0;' 0 DA;' < :' < ' ;' U,0' < ' ?,2?>2,; < 0' ;A,;' AB' ,?;B=' ,22' ,2< D6' AB' A,R, = D' < ';AB' <> ' ?< F, B0' ,;' $, H,' =BZ' +>B ?<' < 0' ,' 0BF, ,;B' ?< 0 =B ,; < 6' ;' B0;B=' < ' ;AB' HB2 B ';A,;';AB' F,00' ;AB B' U,0' 0<' = ?>2;:' ;A,;' <> ' ?< F, B0' ?<>2=' =B B =' ;' ,D, 0;' , @' > HB 0:' , =' ;A,;:' ' ;AB@' UB B' ;> B=' A DAB ' >F' ;AB' EB :' ;AB' >00, 0' U<>2=' D EB' ;AB' 2B0' U, D' ' , F2B';' B' < ','0, B' B; B,;666 6' FB? ,2' BF< ;0' UB B' ,=B' < ' ;AB' 0;,;B' < ' ;AB' < =0' < ' ;AB' D>B=,' %2% ;' < D:' , =' ;AB' ,F = ;@' < ' ;0' 0B0' U,0' F, ; ?>2, 2@' , B=6' ' < ?B ' A,=' 0FB? ,2' ?A, DB' < ' ,22' =B0B ;B 0' < ' ;AB' B B @:' ;<' BW, B' ;AB ' , =' H D' ;<DB;AB ' ;AB ' < ,; < 6' $B,?< 0' UB B' F BF, B=' < ' ?< 0F ?><>0' AB DA;0:' 0<' ,0' ;<' ?< > ?,;B' < ,; < ' ,0' ;<' ;AB' B B @80' < B 0 EB' <EB B ;06' <' B 0> B' ,D, 0;' 0;, B0' ' ;AB' DA;:' F< ;B 0' UB B' BF;' ,;' ;AB' 0;,; < 0' < ' ?< > ?,; < :' = B?;B=' ;<' ;AB' HB,?< 06' 6 6 6' 0') ,F B ' A,0' B , B=' ' A 0' 0;< @:' (%2% ' :'%(' 0> ?B=' < ' ;AB' = E 0 < ' ;<' DB;' > =B ' , 0' ' ;AB' ==2B' < ' ;AB' DA;:' , =',' M>, ;B ' < ' , ' A<> :' DA;' < ' =,@:';<' H D' ;' ' < =B ' < 'H,;;2B';<' ;0' ,2, ' F<0;0:' U ;A' ;AB' H,DD,DB' 2<,=B=' , =' ,00B H2B=' ,;' ,' ?< EB B ;' = 0;, ?B' ;<' ;AB' B, 6' =' ;A 0' <;' >F< ' ,' ?< ?B ;B=' 0 D ,2:' < ' ,0' ,' ; ,2:' H>;' ,;' ,22' ; B0' , =' ?B ;, ' T8

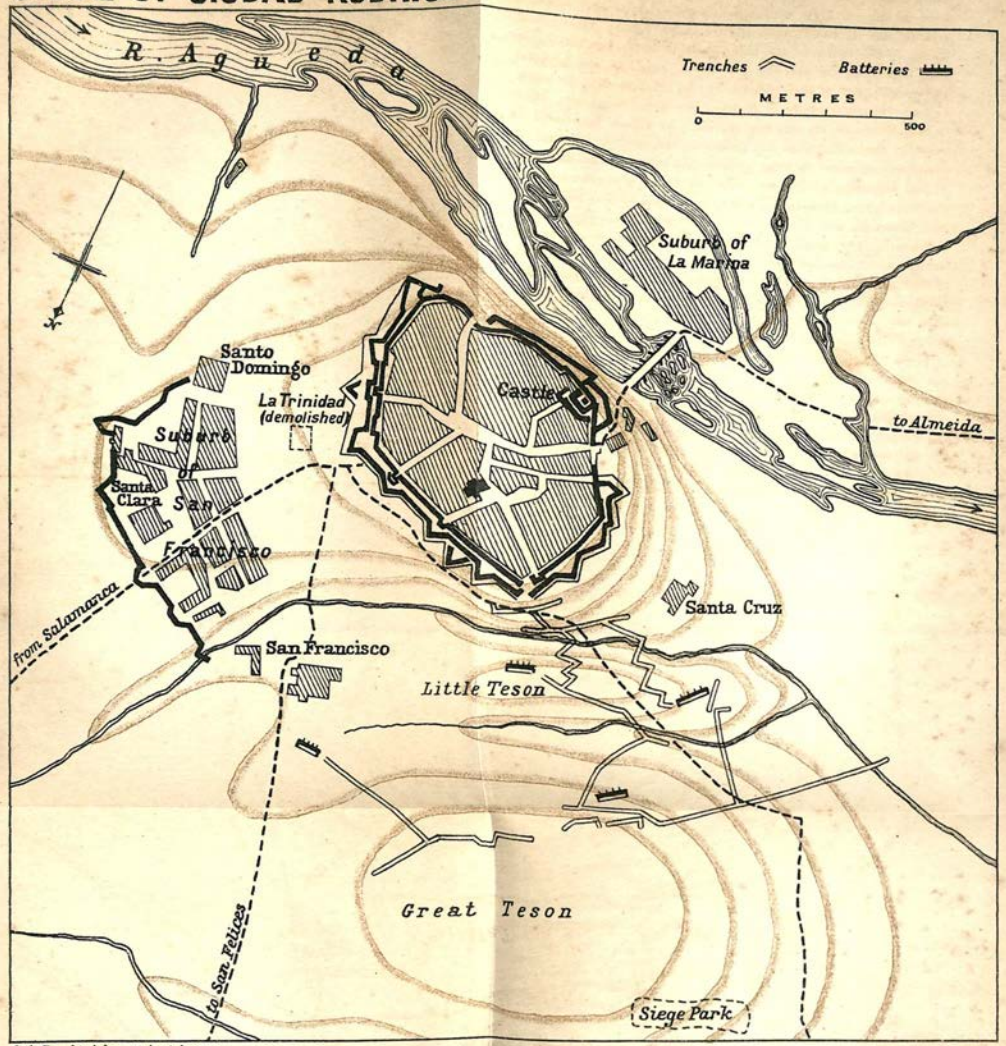
' B' < ' ;AB' <0;' ?> <>0' F< ;0' ' 2 ,U 9B B=@80' 1 : ;' XF6' S' 0' ;A,;' < ' ;AB' BF< ;0' < ' =B0B ;B 0' ,> > =' 0>??BB=B=' ' B?< 0; >?; D' ;AB' BW,?;' ?< F<0 ; < ' < ') B@80' ?< F0:' ' H D,=B0' , =' H,;;,2 < 0:' U ;A' ,' ,2 B < ' < ' < 2@' < B' H,;;,2 < ' , =' : ' B ';<' BU6

^ A,U 9B B=@:' 1 ;' FF6' O ' , =' O46

< B' ;A, ' ,' ;A =' < ' ;AB' B ' U,22:' UA ?A' ?<>2=' HB' H,;;B B=' <EB ' ;0' 0> ;6 ;0' <>;2 B' U,0' R DR,DDB=' ' ;AB' < ' < ' B=, 0:' , =' ;' U,0' > 0AB=' U ;A' ,' = @' = ;?A6 ;0' D2,? 0:' <U D' ;<' ;AB' 0 D' < ' ;AB' <22:' D,EB' ;' 2 ;;2B' F <;B?; < :' 0< ;A,;' H<;A' ;AB' <2=B ' , =' ;AB' <=B ' U,22' ?<>2=' HB' 0B, ?AB=:' < ' ;AB' D B,;B ' F, ;' < ' ;AB ' AB DA;:' H@' ;AB' , ; 22B @' < ' ,' HB0 BDB 6 >;0 =B' ;AB' B,0;B ' D,;B' < ' <= D<' 2 B0' ;AB' 0; ,DD2 D' 0>H> H' < ' , ' " , ? 0?<:' < ' EB @' 2<U' D <> =6 ;' U,0' 0< 2, DB' , =' 0< ?2<0B' ;<' ;AB' U,220' ;A,;' ;AB' D<EB < ' B ,0;' ?< 0 =B B=' ;' ,H0<2>;B2@' B?B00, @' ;<' ;, B' ;' 0 =B' ;AB' ? ?> ;' < ' A 0' =B B ?B06 ;' A,=' ,??< = D2@' HBB ' 0> <> =B=' H@' ,' 0; < D' B, ;AU< :' , =' ;AB' ;A 8BB' D B,;' < ,0;B B0' UA ?A' ;' ?< ;, 0V , ' " , ? 0?<:' , ' *< D<:' , =' , ;,' 2, ,V A,=' HBB ' 0; B D;AB B=' , =' 2<<FA<2B=6 AB' 0 ,22' 0>H> H' < ' %,' 1 , ,:' N>0;' ,? <00' ;AB' H =DB:' U,0' B; B ?AB=' , =' , B=:' ,0' U,0' ,20<' ;AB' ?< EB ;' < ' , ;,' >R:' UA ?A' 0;, =0' 0<2,;B=' ' @, =0' <>;0 =B' ;AB' < ;A UB0;' , D2B' < ' ;AB' ;<U 6 ;AB ' <>;2@ D' H> 2= D0' A,=' HBB ' 2BEB22B=' ;<' ;AB' D <> =:' 2B0;' ;AB@' 0A<>2=' , < =' ?<EB ' ;<' ;AB' B B @6

AB0B' F BF, ,;< 0' UB B' EB @' U 0B' , =' AB2F >2:' H>;' ;AB@' = =' <;' =<' ,U,@' U ;A' ;AB' , ' UB, B00' < ' >=,=' <= D<' ?< 0 =B B=' ,0' ,' <=B ' < ; B006 % B' , @' <;AB ' B= ,BE,2 0; < DA<2=0' ;' 0' ?< , =B=' H@' <>;2@ D' AB DA;0:' UA ?A' ?<>2=' HB' = 0 BD, =B=' ,0' , ' B2B B ;' < ' =, DB ' ' ;AB' <> ;BB ;A' 6< ' ;AB' 0 W;BB ;A' ?B ;> @:' HB?,>0B' < ' ;AB ' = 0;, ?B:' H>;' HB?, B' ,22 ' F< ;, ;' U ;A' ;AB' F <EB B ;' < ' , ; 22B @6 ' ;A 0' ?,0B' ;U<' <220:' ?< 0 =B ,H2@' A DAB ' ;A, ' ;A,;' < ' UA ?A' ;AB' F2,?B' 0;, =0:' 2 B' <>;0 =B' ;0' < ;AB ' U,2206 AB' 0 ,22B :' , B=' ;AB' % ;;2B' B0< :' 2 B0' < 2@' ' @, =0' < ' ;AB' < ;AB ' , D2B' < ' ;AB' ;<U 7 ;' 0' 0< B' ;@' BB;' A DAB ' ;A, ' ;AB' H,0B' < ' ;AB' , F, ;06 B= ,;B2@' HBA =' ;' 0B0' ;AB' (B,;' B0< :' EA ?A'=< ,;B0' ;AB' UA<2B' ?<> ; @ 0 =B:' ;0' H <,=' 2,;' ;<F:' ;A BB M>, ;B 0' < ' ,' 2B' ' = , B;B :' HB D' ,' A> = B=' BB;' ,H<EB' ;AB' 2BEB2' < ' ;AB' F2, 6 ;' U,0' A<FB2B00' ;<' ;A ' < ' A<2= D' ;AB' 2 ;;2B' B0< ' ,0' , ' <>;U< :' 0 ?B' ;AB' D B,;B ' < B' 2<< 0' =<U ' ;<' ;' , =' 0B, ?AB0' ;' < ' B =' ;<' B =6 AB' (B,;' B0< :' < ' ;AB' <;2 B ' A, =:' 0' 0< 2, DB V ;0' ? ?> ;' 0' ,H<>;' ;AB' 0, B' ,0' ;AB' ? ;@' ;0B2 V;A,;' ;' U<>2=' HB' F<00 H2B' ;<' ;A ' < ' =B B = D' ;' ,0' UAB ' B ; B ?AB=' ;' U<>2=' BM> B' ,' D, 0< ' < ' ,;' 2B,0;' : ' B :' , =' B ,0;

SIEGE OF CIUDAD RODRIGO



B.V.T. Bartholomew, Oxford, 1907

AB0B:' U ;A' ;AB' $; 0A:' , D' ,' ;<; ,2' < ' : ' B :' UB B' ,22' ;A , ;' & B22 D;< ' ?<>2=' ?<> ;' >F< :' < ' AB' ?<>2=' <;' =, B' ;<' <EB' 228Ø : ' B ' < ' ;AB' 0<>;A:' UAB B' ;AB@' UB B' <H0B E D' B@ B :' < ' ;<' = 0F2,?B' ;AB' 0 ,22' B0B EB:' UA ?A' 2,@' ,;' H , ;B0' , =' A< , ' ;<' D>, =' ,D, 0;' ,' F<00 H2B' " B ?A' <EB' ,2< D' ;AB' ,D>0' H@' (,0;B22<' $, ?<6' % 0H< ' ?<>2=' <;' HB' 2B ;' > F <;B?;B=' < ' ;A 0' 0 =B:' 0<' 2< D' ,Ø B@ B ' 2,@' HB;UBB ' ;AB' ,D>0' , =' ;AB' (>,= , ,6

$@' H D D' >F' BEB @' , ' & B22 D;< ' ?<>2=' A,EB' ,;;,? B=') B@8Ø : ' ' < ;' < ' <= D<' U ;A' : :' < 'UA< ' B, 2@' A,2 ' U<>2=' A,EB' ?< 0 0;B=' < ' ;AB' BU2@' < D, 0B=' +< ;>D>B0B' H D,=B0:' < ' UA ?A' A, =2@' ,' H,;;,2 < ' A,=' HBB ' > =B ' B6 B' U<>2=' A,EB' A,=' > =B ' : ' ?,E,2 @' ;<' ,?B' P: :' , =' ,' , B=' B < ;@' ' , ; 22B @ ,20<6) <' F ,?; ?,2' ,00 0;, ?B' ?<>2=' A,EB' HBB ' D<;' H@' E ; D' ;AB' ?< <FB ,; < ' < ' 1 , ; ' , B ,8Ø =BF2B;B=' F, 0A' = E 0 < ' < ' : ' B :' UA ?A' 2,@' < ' ;AB' A 220' ,H<>;' ;AB' 0<> ?B0' < ' ;AB' D>B=,:' U,;?A D') B@8Ø , 6 ';AB' 0;' 0; < B' 0A<>2=' , 2:' , =') B@' UB B' <;' 0> F 0B=:' & B22 D;< ' U<>2=' A,EB' C> <;8Ø 4: ' B ' ;<' ?<> ;' U ;A' U ;A ' < ;@ B DA;' A<> 06 >=,=' <= D<' 2 B0' < ' ,' F2, :' ,' >22' =,@8Ø , ?A' < ' ;AB' A 220:' , N' H@' ,=E, ? D' ;<' B2 BEB' ;' ;AB' $; 0A' , @' >0;' ?< ;' ;0B2 ' ;<' , ' ,?; < ' ' ;AB' <FB 6' ;' 0' <' U< =B ' ;AB ' ;A ,;' & B22 D;< ' B >0B=' ;<' ,;;B F;' ;AB' <EB B ;7 UB, ' ?,E,2 @' , =' U ;A' : ' ; <<F0' < '> ?B ;, ' E,2>B' ' A 0' , 0:' AB' U<>2=' A,EB' HBB ' ,=' ;<' B H, ' >F< ' 0>?A' , ' <FB ,; < 6' ;' U,0' <0;' F <H,H2B' ;A,;') B@' ?<>2=' A,EB' HBB ' 0> F 0B=:' , =' < ?B=' ;<' DA;' U ;A<>;' C> <;8Ø , =:' UAB ' AB' A,=' : ' A< 0B B ' ,;' A, =:' ;<' = 0?<EB ' , =' BF< ;' ;AB' 0;' <EB B ;' < ' ;AB' D2< +< ;>D>B0B6) ,F<2B< ' A,=' HBB ' DA;' UAB ' AB' ;<2=' 1 ,00B ,' ;A,;' ;' U,0' F ,?; ?,22@' F<00 H2B' ;A,;' & B22 D;< ' U<>2=' < B ' H,;;2B' ' ;AB' F2, 06' B ,0;' A,=' HBB ' 0B ;' ,00> , ?B0' ;A,;' ;AB' $; 0A' , @' U<>2=' =<' , @;A D' ;A,;' U,0' B,0 H2B' < ' A 0' B2 B :' H>;' AB' U,0' U, B=' ' ,' 0>FF2B B ;, @' 2B;;B ' < ' C> B' P;A' ;A,;' ;' DA;' HB' F<0Y 0 H2B' ;<' , =' A 6 K' ! <>' U 22' HB2 BEB:' U <;B' & B22 D;< :' K' ;A,;' ' ' 0A<>2=' <;' HB' ,H2B' ;<' ,;;B F;' @<> ' B2 B :' ;' U 22' HB' <U D' ;<' ;AB' 0>FB < '0; B D;A' < ' ;AB' B B @:' , =' ;<' ;AB' B?B00 ;@' < ' @' ,;;B = D' ;<' 6<;AB ' F< ;, ;' <HNB?;0 68') <;U ;A0;, = D' ;A 0'

= = L & # % %) ( ) # " ' # * .) # O

?, >; < ; U<>2= , FFB, ; A, ; ; AB F, 0A D<EB < 0; 22 A<FB= < F < F; , 00 0; , ?B6 ; 0BB B= ; < A : , 0 ; = = ; < , 22 F, 0A , = 0< B # D2 0A < ?B 0 , ; ; AB ; B ; A, ; & B22 D; < U<>2= <; HB , H2B ; < B => B ; AB 0FB?; , ?2B < >=, = <= D<HB D ; , B UA 2B A 0 <>; F<0; 0 UB B 2@ D < 2@ 0 W 2B0 < ; < ;6 A<0B UA< AB2= 0>?A E BU0 2 ; ; 2B BU ; AB 2BW H2B ?A, , B; B < ; AB , U ; A UA< ; AB@ A, = ; < =B, 2: < A 0 ?< Y ; B F; < ?< 0 =B , ; < 0 < F =B < 0B ; B ; 6 < ; , B , D B, ; 0 : UAB E ?; < @ U<>2= B, < 2@ ; AB , 0 D < ; AB 0 BDB < <= D< ; 22 C> <; , = 9 B22B , 0A<>2= A, EB N< B=) B@: UA 2B =B B, ; DA; B, ; AB 2<00 < +< ; >D, 2: U, 0 <; ?< 0< , ?B U ; A & B22 D; < 8 0 ?A, , ?; B 6 AB F<00 H2B D, , = 2<00 UB B ; << > BM>, 2: , = AB EB @ DA; 2@: , = <; U ; A<>; >?A BD B; : B , B= <H0B E, ; < , ; B2< ?< B 0> 0 >F ; AB , ; ; B ; A>0G V K >0; 2B, EB ; AB <> ; , 0 , = ? <00 ; AB F2, 0: , 0 UB22 , 0 ; U< EB 0: ; < , 0B ; AB 0 BDB6 < =< ; A 0 A, EB , H<>; : B I ??>= D , B , 8 0 F, , =0J: < UA ?A : , B ?, E, 2 @^6 ??>=B= , B : F, , =0 , = +< ; >D>B0B: UA ?A ; <<F0 I; < 0, @ ; AB HB0; < ; AB J , B < =<>H; >2 M>, 2 ; @6 0 DA; : > =B ; AB0B ? ?> 0; , ?B0: ; < 0 , DB B , 2 , ?; < ; < , 0B ; AB 0 BDB < >=, = <= D<Z 0A<>2= ; A <; T68 = , D, : K 1 @ <HNB?; 0 ; < HB , H2B ; < B2 BEB ; AB F2, ?B: ; 0A<>2= HB , =E 0, H2B ; < , ; ; B F; ; : ?< 0BM>B ?B < , @ , 2; B , ; < ; AB B B @8 0 < ?B6 A 0 =<B0 <; , FFB, ; < HB , EB @ F <H, H2B BEB ; , ; F B0B ; : , =<>DA; <; ; < HB F <E =B= < , ??< = D ; < ; AB ?< < >2B0 < F >=B ?B: , ; , @ ?< 0 =B , H2B 0 ^68 #WF B00 < 0 < BD B; , 8 , ==B=: K =< <; D EB ; AB , ; ; B

4 @8 A2 * -72 6 - * - , 0 : 2 * K - = , 2 , - ** , - .2 5 0 -6 * 0 55-0 5 2 0 6 0- 2 2 * "-1 * , - I- - 2("* * - 20 2 - * , 0 0 55-0 * (

4 ! * 0 -. 6 , -0 2 * 2 - - * 2 - . R0- $*A 0* 8 0 < % R ' (S L /- 1 -2 1 N ! -2 - 6 * - -/- , -6 2 - , - + - , . /- 0 * * * ! * 52 N , - , -1 5- 6*00-00 * * * , -1 *0- - , , 0 * - 6* 2 * , - , 2 % .2: $*. 5*(9 , -1 , 2/- 5* * . , 0 * (8 8 0 5, .- G-0 2 - 20 * . 0-- * * , #2 %2 - 20 * - - , * - * . , 2/- A-- P' 02A -0 2 . A21* - 0(& , - ' 2/2 1 S - - ! * 5 -0- 2 . 62 2 .0(4 - 5 * * - 1 - -0 -1 K - Z - 5 * * % 2 . K - B(

C2: E & 3 (E '' = > > (/ A$

>F7 ;AB@ A<2= <>;2 B B ;AB@ , B U< ;A 0 , E D: , => =B ?B ; , ? ?> 0; , ?BO ; DA; HB F<00 H2B ;< ?> ;AB 0 6c 8 $>; ;AB K ?B ; , ? ?> 0; , ?BO 8 BEB ?, B , H<>;7 ;AB@ 0BB ;< A , EB HBB ;AB F<00 H 2 ;@ B ;AB ;A , ; I J) B@ < C> <; DA; , B =B; , ?A B ;0: < <EB ;AB ?< F0 ;< , 2B00 ?< ?B ; , ;B= F<0 ; < ;A , ; AB@ , ; F B0B ; <??>F B=: < I J ;A , ; ;AB@ DA; < , ?<EB D , @: , = , =E , ?B ;< = EB A < < < A 0 F B0B ; M> , ;B 0: UA ?A UB B ;<< ?2<0B ;< >= , = <= 8 D< < ;AB ?< < ;6 A 0 2 , 0; ?< ; DB ?@ , 2 <0; A , FFB B=: , 0 UB 0A , 22 0BB7 F <H , H2@ ;AB B B @ A , = ?< B <>; ; < , ; ; , ? A & B22 D;< U<>2= A , EB , ??BF;B= H , ; ;2B: < B < ;AB =B B 0 EB F<0 ; < 0 ;A , ; AB BU 0< UB22 A<U ; < 0B2B?;6

) B@: , 0 A, 0 HBB , 2 B , =@ B ; < B=: , EB= HB < B ;AB < ; B00 U ;A 0< B : B < 1 , @ ;A6 C> B 0; AB ;A BU , H =DB , ? <00 ;HB D>B= , : , 2B , = , A , 2 , H<EB <= D<: H>; 0B ; < ; <<F0 , ? <00 ;6 U< = , @0 2 , ; B 1 , 00B , ?, B >F < ;AB B, : , FF <EB= < ;AB F2, ;A , ; A , = HBB < B= < H B , ?A D ;AB ? ;@ < ;AB 0 =B < ;AB ; U< B0< 0: , =: A , E D BE BUB= ;AB P;A < F0: ;<< A 0 U , @ H , ? ;< , 2 , , ?, 6 ; ;A 0 < B ; AB D, EB < =B 0 ;< B@ B , = ;AB = < F0 ;< 2B , EB >W 22< , = ;AB E , 22B@ < ;AB (>, = , , : , = ;< ? <00 ;AB , D>0 ;< < , , = +2 , 0B ? , : < UAB ?B ;AB@ ?<>2= ;A B , ;B (, 0; B22< $, ?< , = H , ;B06 A 0 U , 0 , ??< =Y , ?B U ;A ;AB < =B 0 < ;AB # FB < : UA< A , = H ==B A W ?, 22 >F B@ B < ;AB (>, = , , ; ;< ?<EB A 0 2, 6 >?A , <EBY B ; A , = HBB < B0BB H@ & B22 D;< : UA< , 0 B, 2@ , 0 C> B 5; A A , = = B?; B= 22 ;< 2B , EB +< ; , 2BD B U ;A A 0 : B : , = ;< ? <00 ;AB , D>0 , ; . 22 , . B2A , ;AB < B ; ;A , ; B@ B 0A<>2= A , EB F, 00B= ; , ; 2 , , R 6 < B = , @0 2 , ; B ;AB (, 2 ? , DB B , 2 1 , A@ 0B ; ;< ; AB $; 0A AB , = M> , ;B 0 <> => F2 ? , ; BO <) , F<2B< 8 = 0F , ; ?AB0 ;< 1 , 00B , , = 9 D C<0BFA: UA ?A A , = HBB ;B ?BF;B= H@ D>B 22 , 0 < ;AB U , @ ;< , 2 , , ?, 6 AB@ ?< <H< , ; B= , 22 & B22 D;< 8 0 0>0F ? < 06

4 - 5 * * K 1 >(

4 , -0- - " 26* - * 8 . 062 , - *0 =P'P '=P'P=>G 2 . =P' B 20 0 0, * A1 , - -7 - - 2 2 10 0 * , - 5 / - A1 @8 A2 , 0 . 2 1(- -2. , - * / - ; 9- -0 * . * K 1 =(" *(=P' => 20 / - 1 /2 2A - 20 5 / 5 , - -72 0 - 5 , * , - . P , 2 . , %* 60 C , - 0 2A0* - 1 - 2 2 2 10 0 * , - , 2 - 5 * *A 2 - .(

= = L 6 1 #' * # ' " ' 1 #) O4

, =' B ,H2B=' A ' ;<' F <E =B' ,D, 0;' ;AB' =, DB ' < ' ;A 0' 0 =B' BEB ' HB < B' ;' A,=' HBD> ' ;<' , 0B6 228Ø <>;B' H@' . 22,' . B2A,' HB D' ,FF B? ,H2@' 0A< ;B ' ;A, ' ;A, ;' < ' B@ B :' AB' U,0' ' F<0 ; < ' HB@< =' ;AB' ,D>0' HB < B' ;AB' =' < FØ' A,=' B,?AB=' < ,6 AB ' ?,E,2 @' B;' , =' 0 0AB=' ,;' %,=<B <' < ' ;AB' 3, R, ,0;B22<' $, ?<' <,=' < ' C>2@' =6 A>0' ;AB' B2,; EB' F<0 ; < ' < ' ;AB' ;U<' A<0; 2B' < ?BØ' ' ;AB' 0<>;A' U,0' BW,?;2@' F B0B EB=6 & B2H D;< ' BU' ;A,;' AB' ?<>2=' ?,22' ' 22' ;<' N< ' A 0' , ' , @' ,0' M> ? 2@' ,0' 1,00B ,' ?<>2=' = ,U' B@ B ';<' A 0B2 ';A <>DA' ;AB' +,00' < ' +B ,2B0 V ;AB' < 2@' <>;B' F<00 H2B' < ' A 6 B' B2;' ,22' ;AB' < B' 0B?> B' HB?,>0B' AB' A,=' <U' 0< B' $; 0A' ; <<FØ' ,;' H , ;BØ' B,=@' ;<' 0>FF< ;' 226' A BB' BU2@' , EB=' H,;;,2 < 0' UA ?A' 2, =B=' ,;' % 0H< ' B, 2@' ' F 2:' A,=' HBB ' F,00B=' >F' ;AB' ,D>0' ;<' A< , ' , =' ;AB' 2 B' < ' ;AB' 3BRB B:' UAB B:' > ; D' U ;A' ;U<' +< ;>D>B0B' H D,=B0:' ;AB@' < B=' %B ;A8Ø' K ;A' * E 0 < :8' ,' B0A' ,?;< ' ' ;AB' 0 ;>,; < 6 A 0' =B;,?A B ;:' U ;A' ;U<' H,;;B BØ' ,==B=:' ?<>2=' ,00 0;' 22' U ;A 46 ' B :' ' B@ B ' 0A<>2=' F>0A' < U, =' ' ;AB' = B?; < ' < ' (,0;B22<' $, ?<6

.AB;AB ' ,;' ;A 0' < B ;' 1,00B ,' U,0' F <F<0 D' ;<' < =B ' ,' 0B <>Ø' ,;;,? ' < ' ;A 0' 0 =B:' < ' UAB;AB ' AB' U,0' < ' ;AB' 0;' ;B = D' ;<' H D' >F' ;AB' =' < FØ' ;<' N< ' ;AB' , ' , @:' 0' <;' ?B ;, 6),F<2B< ' ' 0< B' < ' A 0' = 0F,;?ABØ' 0BB 0' ;<' B?< B =' ;AB' ,;AB ' A,R, =<>Ø' K ,;;,? ' < ' =<>H2B' BW;B ,2' 2 B08V ,' B0>2;' < ' A 0' DB B ,2' > =B B0; ,;B' < ' & B22 D;< 8Ø' B0 0; D' F<UB 6 ' 1,@' 5;A' AB' ;<2=' A 0' 2 B>;B , ;' ;A,;' U ;A P 6 ' B ' < ' ;AB' P;A' , =' ;A' < FØ' AB' ?<>2=' ?,F;> B' H<;A' >=,=' <= D<' , =' 2 B=,:' , =' ;AB ' , ?A' K B;A<= ?,22@' 8 ;<' +< ;>D,2:' UA 2B' B@ B ' ,;' 2?, ;, ,' ?<>2=' ?<EB ';AB' ?< Y > ?,;<' U ;A' 1,=' =' , =' B ,?B' ' FFB ' $B ,7' K' 2B' F ?B' 2B' , ;B =,' =, 0' ?B;;B' F<0 ; < ' 0, 0' 2B' 2, 00B ' B ;, B 68' 1,00B ,:' A<UBEB :' = =' <;' ;A ' A 0' , ' , @' 0; < D' B <>DA:' , =:' HB D' 2B ;' ,' BB' A, =' H@' A 0' ,0;B :' >2; ,;B2@' ?,22B=' ' B@ B ';<' N< ' A :' , =' 0<' BB=' & B22 D;< ' < ' ;AB' A, ,00 D' =<>H;' ,0' ;<' UAB;AB ' AB' DA;' <;' A,EB' ;<' =B B =' A 0B2 ' < ' ;AB' 3BRB B' , =' < ' ;AB' 1 < =BD<' ,;' ;AB' 0, B' < B ;6

8 -0-' - -' ,-' [0 " [> " [,' ' 2 /-.' 2 ' # 0A* ' 6 ' =G (#- ,8Ø . / 0 * ' 20' * 2 1' * 0 -.' * 1' * ' K 1' =P' , ' -2 1' BW 0;B=' 0 ?B' C> B6

= = L $ 1 $ * 1 #) " ' * * * (05
, >22 BF< ; < ; AB 0; , ; B < ; AB D, 0< , = ; AB F <D B00 < ; AB
B B @80 U< 06
; U, 0 F<00 H2B < ; AB " B ?A ; < <FB ; AB 0B?< = F, , 22B2
0< 2< D , 0 ; AB ?< EB ; < , ; , >R U, 0 AB2=: < ; AB B < ;
A 0 <>; U< U<>2= A, EB B 2, =B= ; 0 UA<2B 2B D; A6 ; AB
DA; < ; AB = O; A: ; AB B < B:) B@ ; B= ; < 0; < ; AB
?< EB ; U ; A , F ? B= H<=@ < (B , = B 07 ; AB@ H2BU ; 0
=<< U ; A , FB; , =: , = 0B; B ; < ; 0 2<UB 0; < @: H>; UB B
, 22@ = EB < 6 AB ?< EB ; U, 0 F, ; , 22@ =B0; <@B=: H>; ; AB
D, 0< D, 22, ; 2@ ?2> D ; < ; 0 > 0: , = ?<EB B= ; AB 0B2EB0
; AB =BH 06 AB " B ?A 2<0; ; BB 22B= , = ; @ U<> =B=
; A, ; DA; 6 C> B ; A ; AB H, ; B B0 <FB B=: U ; A<>; ,
U, ; D < ; AB B=>?; < < , ; , >R: U ; A < ; @ 0 W D> 0
F2, ?B= 0 W H, ; B B0 , 2< D ; AB ? B0; < ; AB B0< 6 AB
?<> ; B B < ; AB HB0 BDB= U, 0 EB @ B B?; EB 7 ; U< BWFB 0B
, D, R B0 ?< ; , D 5: 2H6 < F<U=B UB B H2<U >F ; AB
; B ?AB0: , @ D> 0 = 0 <> ; B=: , = < B H, ; B @ 0 2B ?B=6
AB 2<00 < ; AB HB0 BDB 0 U, 0 AB, E@ AB F, , =0 0> B B=
2B00: H>; B0 H < B <>; 0BEB , 2 M>, ; B 0 < ; AB ; <U < ; AB
0AB220 ; A <U H@ ; AB " B ?A < ; , 0: , = , @ A<>0B0 UB B
=B0; <@B=6 AB > 0 < ; AB ?< EB ; < , ; , >R: < B<EB :
UB B 0< ; A< <>DA2@ H, ; B B= ; < F B?B0 ; A, ; AB D, 0< B; B=:
UAB , , 00, >2; U, 0 , =B >F< ; H@ (B , = B 0 , ; B DA; Y
, 226 A 0 B , H2B= ; AB " B ?A ; < F>0A < U, = ; AB U< 0
>?A B, B ; < ; AB ; < E 6
" <> = , @0 < > <>0 , ; 22B @ B D, DB B ; <22<UB=: UA ?A
; AB HB0 BDB 0: ; A<>DA 0> B D AB, E 2@: 0>??BB=B= <; < 2@
0B; ; D < B ; A, A, 2 ; AB ; <U < B: H>; : UA, ; U, 0 < B
0B <>0: , D, H B, ?A ; AB , >00B H , @B: , ; AB F <NB?; D
, D2B < ; AB < ; A 0 =B < ; AB ? ; @: < UA ?A <> < ; AB H, ; B B0
A, = HBB ; , B= : , = N> D ; AB B B= , BE, 2 U, 22 , ;
; AB H, ? < ; 6 $B2 BE D: U < D2@ , 0 ; 0BB 0: ; A, ; AB H B, ?A
1, 0 F , ?; ?, H2B:) B@ 0B ; , < ?B ; < 0> < ; AB ; <U 6
B , 0; BF2 B= ; A, ; AB U, 0 0; 22 , F<0 ; < ; < = B B = A 0B2 6

8 200 2 2 - 6 * 2 2 2 2 , 0 .21(* 06- , - A* A2 .E
- 2 . 2. -<20 20 , 0 * ? 2 2 , - - .2 * 0 -6* , - -* *
, - 6- * . - 2 5 , 2 , - + - , *00 , 2. A-- = - . 2 . B=
* . - . , - -20 , 2. -7 --. - . = R0- - 9- 20 (6(L 2 . , 2
, - . - - - * , - 6 2 - 200- * 01 62 -. C , , 20 * 201 1- (

= = L %$ + $@ ! @ 9 %V =

?< , =B UA< A, = B?B ;2@ ?< B >F ;< ;AB < ; ;< <H0B EB < A 0B2 ;AB 0; , ;B < ;AB B B @80 < ?B06 B <> = ;AB ;<< 0; < D ;< HB B==2B= U ;A: , = 0B ; H, ? , 2B;;B 0; , ; D ;A, ; AB U, 0 B, =@ ;< <EB AB 0, U , @ ?A, ?B < 0>??B00: H>; ;A, ; , ; F B0B ; < B 0>?A U, 0 E 0 H2B6 B ;AB B; B=: , ;B 2B, E D , > > = ;U< 0M>, = < 0 < ;AB P;A % DA; * , D<< 0 ;< 0; B D;AB A 0 ;A <>;F<0; 2 B6 B , 0; : ;A<>DA >?A = 0F ;B= H@ & B22 D;< 80 BF2@: ?< ; >B= ;< , B , E D< <>0 =B B ?B: H>; ;AB ;<U U, 0 <U <0;2@ > 0: , = ;AB H 8B, ?A D, FB= U =B6

 C>2@ O;A 1 , 00B , UA< A, = , D, ?< B >F ;< E 0 ; ;AB 0 BDB: <H; , B= ;B22 DB ?B ;A , ; & B22 D;< A, = HBB U ;A ;AB % DA; * E 0 < , ; (, 22BD<0: , = =B;B B= ;< F>0A H, ? ;AB $; 0A <>;F<0; 0: < =B ;< = 0?<EB UAB;AB ;AB < ; 2 B < A 0 B B @ A, = HBB 0; B D;AB B= H@ , @ ; <<F0 < +< ;>D, 26 ; 0BB B= ;< A 2 B2@ B <>DA ;A , ; ;AB $; 0A DB B , 2 DA; A, EB , 00B= A 0 , @ < , H<2= 0; < B , ; ;AB HB0 BDB 0: <U ;A , ; ;AB 0; B D;A < = >=, = <= D< U, 0 > D 2<U6 ??< = D2@ ;6 < W80 = E 0 < < = , D<< 0: 0>FF< ;B= H@ , H D, =B < C> <;80 , ; @: ? <00B= ;AB R, E, H << , = = <EB ,> > =80 ?, E, 2 @ F ? B;06 AB@ B; B=: 0 0A D E D< <>02@ , 22 ;AB U, @: ;< (, 22BD<0: UAB B ;AB EB , ; @ H, ; ; , 2 < 0 < ;AB % DA; * E 0 < A, = ?< ?B ; , ;B=6 , > > =: A, E D 0; ?; < =B 0 < A 0 ?A B ;A , ; AB U, 0 <; ;< DA; : B22 H, ? < "< ; < ?BF? < : ;AB U< < ;AB F, 0A < ; B A, 2 U, @ ;< 2 B =, 6 AB B>F< ;AB " B ?A B; B=: A, E D <H; , B= ;AB < , ; < ;A , ; ;AB@ U, ;B=: E R6 ;A , ; , > > = A, = <; HBB B < ?B= H@ , @ ?< 0 =B , H2B H<=@ < ; <<F0 < ;AB B, 6 AB % DA; * E 0 < A, = , <B>E B= U ;A ;0 ?>0;< , @ ;B22 DB ?B , = , 2B ; B00 , 22 = , @7 ;0 2, 0 UB B HB D ?< ; >, 22@ ;> B= H@ A< 0B B <EB F<UB D > HB 0: H>; ; HB, ; ;AB < U ;A B, 0B: , = 2<0; < 2@ EB B U<> =B= UA 2B , 22 D H, ? , ? <00 ;B 2B0 < , H0<2>; B2@ <FB ?<> ; @6 AB " B ?A 2<0; EB < ?B 0 , = <EB ;UB ;@ B <0;2@ ?< H, ;0 U ;A ;AB (B , >00, T0: UA< 0 > F, 00B= ;AB 0B2EB0 <

 -- 2 GV- - .180 1 ; 66(G> 2 . =(
 4 9- 20 (P (+* , - * . * , - 002 0 0- 9-2 0, 80
8 % <%5 (66(SBGP(2 - 80 0 0 0, * , 2 , - =0 + - ,
. 25** 0 *0 * * - , - . , -- 2 . , - B , * - * - * , 0 .21(

/J/ #' 1) ' "' &) (XC> :!' 5
;A 0' =,@:' , =' BFB,;B=2@'?A, DB=';AB' AB,=0' <';AB' A<0; 2B'?<2> 0'
<' ,E<> ,H2B' <??,0 < 06' "<';AB' >;> B' ,> > =' BF;' HBA ='
;AB' * <0' ,0,0:' UA 2B';AB' " B ?A' ;<<';F' A 0' <2='2 B' <';AB'
R,E,6' A 0' <EB' ,=B', @',;;B F;';<' AB2F' >=,=' <= D<'
,' A, =B'H>0 B00';A,'HB < B:'0 ?B';AB' $; 0A'<>;F<0;0' UB B'
<U' ;BB' 0;B,='<'<2@'0 W 2B0' <';AB';<U 6' ',;;B F;'
;<'0;<'H@'0> F 0B';AB" B ?A'?, F0'<';AB' B,'0 =B'<';AB'
F2,?B'U,0'<';AB' >;> B' F<00 H2B6
& , B='H@';A 0',?; E ;@'<';AB'F, ;'<';AB'B B @:' &B22 D;<'
,D,' B <?B=' ,> > =80?,E,2 @:'D E D' A ';A BB'0M>,=<0'
<';AB' O;A' % DA;' * ,D<< 0:'0<' ;A,;' ;AB' % DA;' * E 0<'A,='
<U'0< B' :' A< 0B';<'U,;?A' ;0'2< D', =' >?A' BWF<0B='
<;6' $>;' ;AB" B ?A' ,=E, ?B' <U'A,2;B=',D,'<',' >22'
<; DA;':;AB'=B <0; ,;<'<'T'C>2@'O;A'A,E D' A,=' <'<;AB'
F> F<0B';A,' ;A,;'<',0?B ;, D';AB'0; B D;A'<';AB' $; 0A'
<H0B E D'<?B'HBA ='AB' R,E,6
';AB' <>'=,@0';A,;' <22<UB=' ,> > =80 B; B,;';AB" B ?A'
H,;;B B0'UB B';A> =B D',D, 0;';AB' <;AB',D2B'<' >=,='
<= D<:', ='A,='B=>?B=';';<'<B'E,0;'H B,?A' <B';A,'
'BB;'H <,=6 $>;')B@:' <B'0F, D'<'2 B';A,'U,0'A 0'
U<;:' B >0B='<'<=B',' ,00,>2;';22';AB'UA<2B'<';AB' F, 0A'
, ;22B @'<';AB' B DAH<> D' <;'0A<>2='A,EB'HBB'0 2B ?B=:'
,=';22';AB'B D BB 0'0A<>2='A,EB'U< B='>F';<', ='H2<U''
;AB'?<> ;B 0?, F6' A 0'2,0;'F B2 ,@'U,0',??< F2 0AB='<'
;AB' DA;'<';AB' B DA;A:'UAB',' B'?< ;, D' '2H6'<'
F<U=B'U,0'BWF2<=B='U ;A'0>??B00'N>0;'<>;0 =B';AB'?<> ;B 0?, F:'
,='?,0;'=<U',' E,0;', <>';'<'B, ;A' ;<';AB'=;?A:'0<';A,;'
;AB B'U,0'<U',',2 <0;'2BEB2'<,='<';AB',=E, ?B=';B ?AB0'
;<';AB' <<;'<';AB' B'U,226' AB'D, 0<' BFB,;B=2@'H> 2;'
>F';AB'2 F'<';AB'H B,?A'U ;A'F,2 0,=B0', ='0, =H,D0:'> =B',
AB,E@' B', =',;'D B,;'BWFB 0B'<'2 B6' $>;';AB' 2 0@'BF, 0'
UB B'0UBF;',U,@',D,', ='D,'H@';AB'H,;;B B0'<';AB'%;;2B'
B0<:', =',22';AB'D> 0'<';A 0' <;'<';AB'U,220'UB B'D ,=>,22@'
=0,H2B='P'=B0; <@B=6 #, 2@'<';AB', ;B <<'<'C>2@' 5;A'
;AB'B D BB 0' < B='AB' 1, 0A,2' ;A,;' >=,=' <= D<'U,0'
> ;B ,H2B:', =';A,;',';0;< '?<>2='<;', 2'<'0>??B006' A BB'
H,;;,2 < 0:'?< F<0B='<'F ? B='E<2; DB>', =' D B ,=B'?< Y
F, B0:'UB B:'H <>DA;'>F';<';AB',=E, ?B=' ; B ?AB0:'> =B';AB'
1, 0A,28'0 FB 0< ,2'0>FB ;B =B ?B6' $B < B'2B;; D';AB'2<<0B

$ ' * *' * (' #) * # '

< ' ;AB' H <,=' ,??2 E ;@' < ' >HH2B' HB < B' ;AB :') B@' ,0 B=' < ' ;A BB' E<2> ;BB 0' UA<' U<>2=' ; , B' ;AB' =B0FB ,;B'N 0 ' < ' ?2 H D' >F' ;<' ;AB' ? B0;' < ' ;AB' H B,?A' ;<' 0BB' ' ;' UB B' B; B ?AB=' HBA =6' ' ?< F< ,2' , =' ;U<' F E,;B0' ,=B' ;A 0' =, D' EB ;> B:' , ' 2 DA;2@' >F' ;<' ;AB' 0> ;:' B=' ;AB ' >0 B;0' ;<' ;AB' ;<U :' , =' =B0?B =B=' > A> ;:' > =B ' ,' 0?,;;B D' B' < ' ;AB' BU' F, , =0' UA<' UB B' 0; 22' A<2= D' < ' ;<' ;AB' > 06' ' B?B E D' ;AB ' ,00> , ?B' ;A,;' <;A D' U,0' ;<' HB' B, B=:') B@' < =B B=' ;AB' 0;< D' H,;;,2 < 0' ;<' <EB' <>;' < ' ;AB' ; B ?AB0:' H>;' B B' ;AB@' A,=' 0;, ;B=' , ' < ?B ' U ;A' ,' UA ;B' 2,D' ,FFB, B=' < ' ;AB' H B,?A:' , =' =B0?B =B=' ;<' < ' ;AB' 1 , 0A,2' ;A,;' ;AB' (<EB < ' U,0' F BF, B=' ;<' ?,F ;>2,;B6' " = D' ;A,;') B@' U,0' B= ,;B2@' HB2<U:' B ,0;' ?, B' <>;' ' FB B< ' U ;A' A 0' 0;, ',' BU' >;B0' 2,;B :' , =' 0B;;2B=' ;AB' UA<2B' ,;;B ' ' ,' 0A< ;' ?< EB 0,;< 6') B@' ?< D ,;>2,;B=' ;AB' UA ;B A, B=' EB;B , ' < ' A 0' A, =0< B' =B B ?B:' B;> B=' A ' A 0' 0U< =:' , =' ;<2=' A ' ;A,;' AB' 0A<>2=' A,EB' ,22' ;AB' A< <> 0' < ' U, 6

??< = D2@' ;AB' D, 0< ' , ?AB=' <>;' BW;' < D' ,H<>; O: ' 0; < D:' 2, =' =<U ' ;0' , 0' HB2<U' ;AB' D2,? 0:' , =' U,0' , ?AB=' < ' ;<' $,@< B6' AB' F, , =0' A,=' 2<0;' OP ' 22B=' , =' 55O' U<> =B=:'N>0;' ,'M>, ;B ' < ' ;AB ' < ?B:' ' ;AB ' A DA2@' A< <> ,H2B' B0 0;, ?B6' AB@' A,=' < 2@' ,' BU' =,@0'F <E 0 < 0' 2B ;:' , =:' ;A<>DA' ;AB ' > ; < 0' UB B' H@' <' B, 0' BWA,>0;B=:' ;AB@' U<>2=' A,EB' HBB ' < ?B=' ;<' @ B2=' < ' U, ;' < ' <<=:' BEB ' ' ;AB' 0;< ' A,=' , 2B=:' UA ?A' U,0' ,H0<2>;B2@' F<00 H2B6' AB' " B ?A' ?,F;> B=' ' D> 0:' <0;' < ' ;AB ' ' H,=' < =B ' < ' = 0,H2B=:' , =' 4: ' >0 B;06') <;' ,' A<>0B' < ' ?A> ?A' ' ;AB' F2,?B' U,0' ;,?;:' , =' ,' 2, DB' ,N< ;@' UB B' << 2B00' < ' 2BEB22B=' ;<' ;AB' D <> =6' AB B' U,0' <' >0B' UA,;BEB ' ' F <; ,?; D' ;AB' B0 0;, ?B:' , =' ;' 0' ??B, ' ;A,;' B ,0;' A,=' =< B' ,22' ;A,;' ,' D<<=' < ?B ' ?<>2=6' ' A 0' = 0F,;?A' ;<' ;AB' C> ;,' AB' 0F< B' 0< BUA,;' H ;;B 2@' < ' ;AB' ,?;' ;A,;' & B22 D;< ' A,=' ,=B' <' B < ;' ;<' B2 BEB' ;AB' F2,?B:' 0A<U D' BB2 D' ,;> ,2' B <>DA' > =B ' ;AB' ? ?> 0;, ?B06' 1 , ; ' %,' , B ,:' UA<' A,=' HBB ' ?< , = D' ;AB' F, 0A' = E 0 < ' ;A,;' 2,@' ' ;AB' <> ;, 0' 0<>;A' < ' ;AB' ;<U :' BWF B00B=' A 0' U ,;A' 0; 22' < B' H ;;B 2@:' , =' , ?AB=' < ' ;<' #0; B ,=> ,' ' A DA' =>=DB< :' ;AB' < B ;' ;A,;' ;AB' BU0' < ' ;AB' 0> B =B ' B,?AB=' A 6

AB' " B ?A' A,=' HBB ' < ?B=' ;<' >?A' D B,;B ' BWB ; < 0'

% & " O O % ! $)

1 $ + # 6 # (# " % 1 # *

C>2@ ;A ;AB " B ?A A,= B ;B B= >=,= <= D<: H>;
;B =,@0 < B B2,F0B= HB < B ;AB@ ,=B , @ > ;AB ,=E, ?B6
1,00B ,: UA< A,= B;> B= ;< ;AB < ;: U,0 B0<2EB= ;< <22<U
A 0 ,0;B 80 < =B 0 , = ;< ,?;K B;A<= ?,22@68 ;: U,0 ?2B, 2@
?> HB ;< A ;< HBD ;AB 0 BDB < 2 B =, ,0 0<< ,0
F<00 H2B:, =: ,0 ;A, ;F2,?B 0 < 2@ ;UB ;@ < B 2B0 < >=,=
<= D<: < B 2< D , ?A U<>2= A,EB F2,?B=2 HB < B ;0 U,2206
$>;0 ?B AB A,= < 2@ , BU ;A<>0, = <> =0 < , > ; <
2B ; < A 0 AB,E@D> 0: AB B >0B= ;< <EB < ; 22 ,22 ;AB ,E, 2,H2B
B0B EB0 UB B < ;AB U,@ < ,2, , ?, ;< ;AB < ;: , =
BM> 0 ; < < , > ;AB 1 FF2@ A,= HBB 0B ; ;< $,@< B: B
A,= ,20< ;< =< A 0 HB0; ;< 0? ,FB ;<DB;AB < B <<=: 0 ?B ;AB
,D,R B0 ;A, ;) B@ A,= ?<22B?;B= UB B B, 2@ BWA,>0;B= UAB
<= D< B226 1 < B<EB : : = ,>DA; , ,20 A,= = B= => D
;AB 2,;B 0 BDB:, = ;U,0 B?B00, @ ;< BF2,?B ;AB HB < B ;AB
(B, ; +, ?<>2= <EB < U, =6

C>2@ 0; A<UBEB : 0< B ?< E<@0 A,E D ?< B >F < ,2, , ?, : 1,00B , = B?;B=) B@ ;< ,=E, ?B U ;A ;AB P;A < F0
, = ;< = EB ,> > = H,? < ;< 2 B =,6 AB , F< ;
;A, ; AB U,0 = B?;B= ;< ,0?B ; , < < ;A 0 =,@ U,0 UAB;AB ;AB
D2 0A ;B =B= ;< , B , 0; , = , ; "< ; < ?BF? < : ;AB
0<2, ;B= F, 0A U< UA ?A ,?B0 2 B =, < ;AB < ; B :
HB@< = ;AB > < B06 A 0 U,0 , 0<2 = B DA;BB ;A ?B ;> @ < ;:
?<EB D ;AB H =DB UAB B ;AB A DA <,= F,00B0 ;AB EB 6 ;
A,= 2,;B2@ HBB BF, B=: , = ?<>2= A,EB B0 0;B= , H< H, = B ;
< 0< B =,@06 $>; ; U<>2= A,EB BM> B= , D, 0< < : B : , =: 0 ?B ; 2 B0 ;AB =0; < ;AB F2, : ;AB B U<>2=
HB 2 ;;2B ?A, ?B < B2 BE D ; : < ?B ; UB B 0> <> =B=6
& B22 D;< : ;AB B < B: D,EB < =B 0 ;A, ; ; 0A<>2= HB H2<U >F
UAB BEB ;AB " B ?A 0A<>2= ,=E, ?B < ?B ;<U, = 2 B =, :
, = ;A, ; ,> > = 0A<>2= , B < , ;;B F; ;< =B B = ;AB 2 B

1)6 22

< ;AB > < B0: , =0A<>2=0B =H,? A0 , ; @;<C> ?,:,E 22,DB ,H<>;, 2B <>;0 =B;AB D,;B0< 2 B =, :BBF D A0 ?,E,2 @< 2@;<;AB < ;6 ;AB 0;)B@,=E, ?B=U ;A;AB UA<2B< %< 0< 80 =E 0< :, = B 22, =80 ?,E,2 @H D,=B6 AB B>F< ,>>=:U ;A0< B B2>?;, ?B:B; B=, =H2BU>F "<;< ?BF?< ,0 AB UB ;6 AB" B ?A,=E, ?B=:0 0A D U ;A;AB 0a;A % DA;* ,D<< 0, =;AB (B , >00, 0:H>;,22@A,2;B=,;. ,2=B 1>2,:<> 2B0 < 2 B =,6 ,>Y >=B0;,H2 0AB=A 0B2,;C> ?,:<2@;A BB 2B0 <;AB B B @80 2 B <F? B;06 ;AB BW;BEB D AB B?B EB=,0;<D0>DDB0;<: <;M> ;B,<=B:<A0 A B;<0B =A0 , ; @,?<00 ;AB <,6 K ,<;=B0 <>0<B D,D D,, ,HB@<=;AB <,:8U <;B &B22 D;<6 K '=B ;AB0B ? ?> 0;, ?B0: @<>, B <;<EB B= <;AB 0> UAB B @<>, B:U<>2=;<;HB HB;;B ;A,;@<>0A<>2=?< B;<;A 0 0=B<;:U ;A @<> , ; @,;2B,0;P 8 AB ;B ;,; EB < <;AB <;B UB22 , 0;AB ?< =B ?B;A,;AB < , =B A B U,0 U<;<F2,?B A0 0>H< =,;B80 N>=DB B ;6 A0; B ;A,;?< =B ?B U,0 0< BUA,;0F2,?B=:<, >>=;, B=;U<=,@0 2< DB H@;AB D2,?0<2 B =,:, =;AB BH@0 B=,=0,0;B 6

;>0;HB B B HB B=;A,;2 B =,0 <;<;AB <,:H>;;U< 2B0 <;:, =;A,;;0 D> 0:;AB B<B:==<;?<EB ;AB< B H =DB <EB UA ?A ,>>=?<>2= , B A0 B; B,;6 =BB=:;A,;H =DB , =;AB EB ,20<, B E 0 H2B <2 B =,6 AB <;B00 0 02 DA;2@ , 0B=,H<EB;AB 2BEB2<;AB <22 D F2, :UA ?A BW;B =0 ,0 , ,0 >=,= <= D<6 ;AB EB 2<U0 ,=BBF HB=:0< >?A HB2<U;AB F2,;B,> ,0;<HB 2<0;;<0 DA;6 ;0 ,E B 0 ,0<;<?,2< UA ?A , 0;AB B =<;AB F2, 0 <%B< 6 ;A,0<;B HBB B , B=;A,;2 B =,80 E,2>B U<>2=A,EB HBB =<>H2B=: <2@;A,=HBB <;AB B, 0=B<;AB <,: , =?< , =B=;0 H =DB6 $>;+<;>D>B0B D0 A,=H> 2;, =BH> 2;;AB <2= <;B00 <;0 <D ,2 0;BN U;A <BD, =<0; ,;BD@6 ,>>=:;AB :0A<>2=A,EB B B HB B=;A,;: AB UB B 0>==B 2@,;;,? B= A0?, F<>;0 =B;AB D,;B0: AB 0 B=HB D;A<U H,? ;<;AB ;<U I;AB 2,0;;A D AB U<>2=U 0AJ:<HB D A>0;2B=<U ;<;AB H =DB , =<?B=;<

T & B22 D;<;<,>>= < 2EB ?,:C>2@ P6
& B22 D;<;<,>>= < 2EB ?,:C>2@ : F6 6

F,00' A 0' = E 0 < ' ,? <00' ;' ' =, DB <>0' A,0;B6 $>;' AB' A,=' 0<
< ;B ' ?A,22B DB=:' AB2=' H,? :' , =' BE,=B=') B@80' , =' C> <; 0'
,=E, ?B=' D>, =0:' ;A,;' AB' BE =B ;2@' ?< 0 =B B=';A,;' AB' U,0';, D'
<' EB @' 0B <>0' 0 ' '0;,@ D' UAB B' AB' U,06 B' U,0:' < B<EB :'
= 0?A, D D',' E,2>,H2B' > ?; < 'H@' BBF D' 2 B =,' < 'HB D'
EB0;B=:' ,0' 0;< B0' , =' > ; < 0' UB B' 0; 22' HB D' F<> B=' ;<
;AB' F2,?B6 AB' < 2@' FB 2' U,0';A,;' AB' DA;' HB',;;,? B=' H<;A'
U ;A<>;' U, D', =' H@' <EB UAB2 D' 0>FB < ;@' < ' > HB 0:'
U ;A' ;AB' =B 2B',;' A 0' H,? 6) B ;AB ' < ';AB0B' 0,=EB ;> B0' A,='
@B;' A,FFB B=';<' A '=> D';AB' <> ' , =',' A,2 ' < ;A0' UA 2B'
AB' A0 =' HBB ' =B @ D';AB' P;A' , =';AB' ;A' < F0',2< D';AB' H, 0'
< ';AB' D>B=,6 AB' " B ?A' A,=' BEB ' ,00, 2B=' A ' U ;A' >?A'
< B';A, ' ,' = E 0 < :' < ' A,=';AB@' BEB ' F B00B=' < ' A ' U ;A'
AB,=2< D' 0FBB=:' 0<' ,0';<' F BEB ;' , ' < =B 2@' B; B,;' F <FB 2@'
?<EB B=' H@',' <=B ,;B' B, D>, =6

) <U:' A<UBEB :') B@:' > ; , B22B=' H@' , @' <;AB ' <FB ,; < :'
A,=' A 0' UA<2B' ?< F0' ?< ?B ; ,;B=' HBA =' . ,2' =B' 1 >2,:' , ='
A,E D' 2B, ;' < ';AB' =B 2B';A,;' 2,@' ' ,> > =80' B, :';A<>DA;'
;A,;' AB' DA;' HB' A> 2B=' ;<' ;' , =' ? >0AB=' < '?,>DA;6 $B < B'
=,\E 'AB' , ,@B=' A 0' UA<2B' O: ' B ' ' < B' H <,=' , =' =BBF'
?<2> 6 U<' ?,E,2 @' H D,=B0:' %, <;;B 0' =' >00, 0' , ='
;A' A,00B> 0:' , =' (, =, B80' ;A' , =' ;A' * ,D<< 0:' UB B'
' < ;6 AB ' ?, B' ;AB';A ;BB ' H,;;,2 < 0' < '%< 0< 80' = E 0 < :'
' ,' 2 B' < ' ?<2> 07' HBA =' ;AB ' U,0' 1 B B;' U ;A' B2BEB '
H,;;,2 < 0' < B:' UA 2B' ;A BB' BD B ;0' < ' 1 , ?A, =80' = E 0 < '
I;AB' <> ;A' U,0'D, 0< D' >=,=' <= D<J' < B=';AB' B0B EB6
' ,' D B@' < D:' <22<U D',' DA;' < 'H ;;B ' , :';AB' " B ?A'
A< 0B B ' <=B',;';AB' $; 0A' ?,E,2 @'F ? B;0:' , =' 0B ;';AB ' 2@ D'
AB2;B 0 B2;B ',? <00';AB';A BB' 2B0' < ' <22 D' D <> =';A,;' 2,@'
' < ;' < ';AB' % DA;' * E 0 < 6 ' AB, D';AB' B' < ';AB'
?, H B0' ,> > =80' B ' ;> B=' <>;' U ;A' ;AB ' ,??>0;< B='
?B2B ;@:' , =' ' ,' EB @' 0A< ;' 0F,?B' UB B' ,2 D B=';<';AB' DA;' < '
2 B =,:' U ;A' ;AB ' 2, ' < 2@' '@, =0' < ' ;AB' D2,? 0:' , ='
;AB ' < ;' ?<EB B=' H@',' 0B B0' < ' A DA' 0;< B' U,220' H<> = D'
0>H> H, ' B2=06 AB B' U<>2=' A,EB' HBB ' N>0;' B <>DA' ; B' ;<'
DB;' ?,E,2 @:' D> 0:' , =' FB= B ;,',? <00';AB' H =DB' < ';AB' <,'
';AB' (B B ,2' A,=' 0;, ;B=' < ' ,;' < ?B6 $>;:' <;' B,2 R D';AB'
B, >2' 0; B D;A' ;A,;' 2,@' HBA =';AB' " B ?A' ?,E,2 @' ,=E, ?B:'
AB' B0<2EB=';<' ; B,;' A 0B2 ';<' ,' B, D>, =' ,?; < :' , =' <;' ;<

P # (#' "' %1 # * XC :!' O

D<' ; 22' AB' U,0' F>0AB=6' ' ,' 0> EB@' < ' ;AB' D <> =' ;' 0' B,0@' ;<' > =B 0; , =' ;AB' ;B F; , ; < :' < ' ;' U<>2=' HB' A, =' ;<' =' ,' F B;; B ' H, ; ;2B B2=' < ' ,' =B; , D' < ?B:' ' < 2@' ;AB' B B @' UB B' ' <' < B' ;A, ' <=B , ;B' 0; B D;A6' ' 2< D' =<>H2BY AB, =B=' 0F> ' > 0' =<U ' < ' ;AB' A DA' F2, ;B, >' < ' UA ?A' 2 B =, ' 0; , =0' ;<' ;AB' <, :' >??B00 EB' F< ;0' < ' ;' ?, ' HB' AB2=' < B' , ;B ' ;AB' <;AB :' , =' ;' 0' ? <00B=' H@' , @' 0;< B' U,220' D E D' D<<=' ?<EB ' < ' 0 0AB 06' & ;A' A 0' 2B ;' ?<EB B=' H@' ;AB' B' < ' ;AB' < ; B00:' , =' A 0' DA;' K' B >0B=' 8' , =' ; B = D' H, ? ' ;<U, =0' ;AB' EB :' , > > =' U, ;B=' ;<' HB' , ; ; , ? B=:' ;B = D' ;<' D EB' ;AB' 2B, = D' " B ?A' H D, =B' ,' 2B00< 6' AB B' U,0' ,' =B2, @' < ' < B' ;A, ' , ' A<> ' HB < B' ;AB' " B ?A' , ; @' U,0' >F:' H>;' UAB ' ;AB' ,00, >2;' ?, B' ;' U,0' <EB UAB2 D6' , > > =80' 2 B' < ' ;A BB' $; 0A' , =' ;U<' +< ;>D>B0B' H, ; ; , 2 < 0' ' U,0' 0>==B 2@' ,00, >2;B=' H@' %< 0< 80' ;A ;BB :' UA<' ?, B' < ' , ;' ;AB') (' . % # 5% K' @B22 D:' U ;A' = > 0' HB, ; D:' , =' ;AB' < ?B 0:' 2 B' <> ;BH, 0:' > D' , AB, =' U ;A' ;AB ' A, ;0' < ' ;AB ' 0U< =0:' ?, FB D' 2 B' ,= B ' , =' ? @ D' ,0' ;AB@' ;> B=' ;<' U, EB' < ' ;AB ' B :' ' < 0:' B , ;0' =B' 2, ' +, ; B:' 2B' F B B ' M> ' 08, E, B ,:') , F<2B< ' 2B' B?< FB 0B ,' 8' AB' <22 D' B' < ' ;AB' $; 0A' 0;<FFB=' ;AB' 0;' >0A:' UAB ' 0>==B 2@' ,' " B ?A' ?, E, 2 @' BD B ;:' ;AB' =' >00, 0:' ?A, DB=' , ? <00' ;AB' ;B E, 2' HB; UBB ' , > > =80' 2B ;' , =' ;AB' U,220' < ' 2 B =, :' H , E D' ;AB' B' < ' ;AB' , F, ;0' ' ;AB' <0;' D, 22, ;' 0;@2B6' < B' B22:' H>;' ;AB' D> B 0' UB B' 2> B=' , ;' ;A 0' > BWFB?;B=' =BEB2<F B ;:' , =' B=' U 2=2@:' 0<' ;A, ;' ;AB' A>00, 0' 0UBF;' =<U ' > ?AB? B=' < ' ;AB' BW; B B' 2, ' < ' ;AB' % DA;' * E 0 < :' UAB B' ,' ?< F, @' < ' ;AB' 5 ;A' 2B0' U,0' , A 2, ;B=' , =' HBD, ' = D' ,2< D' ;AB' B, ' < ' ;AB' 2 B' , =' <22 D' ;' >F6' AB@' UB B' 2>? 2@' ?AB? B=' < ' ,' < B ;' H@' ,' 0;< B' U, 22:' H>;' , > > =' 0, U' ;A, ;' AB' >0;' B; B, ;' , ;' < ?B:' 0 ?B' AB' U,0' ;> B=' < ' ;AB' 0 =B' UAB B' AB' A, =' ;A<>DA;' ;A, ;' AB' U,0' 0, B0;6' AB' ?, E, 2 @' , =' D> ' UB B' < =B B=' ;<' D, 22<F' < ' ;AB' H =DB:' ;AB

K' 2 B' O =' < ' ;AB' 2B ;:' ;AB' ;U<' , =< ' H, ; ;, 2 < 0' ' ;AB' ?B ; B:' ;AB' =' < ' ;AB' DA;:' UA 2B' ;AB' =B0' UB B' F, ;2@' = 0FB 0B=' , 2< D' ;AB' < ;:' F, ;2@' U ;A' ;AB' O =6

T' < 08' 0 ? : 3' ' ' D ' (#' I 3% ' F6' 446

8' ' ;A 0:' 8 , B80' < F, @' < ' ;AB' 2 5 ;A:' 0 W;@ 0BEB ' 0; < D:' , ' < ?B ' , =' B2BEB ' B ' UB B' 22B=' < ' U<> =B=' , =' < ;@ EB' UB B' ;, B ' F 0< B 06

1 $ ' "' #' P

, ,=< B0' ;<' <22<U' ;AB :' , =' ;AB' B0;' < ' ;AB' , ; @' ;<' ,22' H,? ' ' B?AB2< ' < ' ;AB' 2B ;:' =B B = D' B,?A' B ??<0> B' , =' <2=' < ';AB' A 220 =BT,0' 2< D' ,0' F<00 H2B6' $>;' ;' 0' A, =' ;<' , B' , ' < =B 2@' B; B,;' UAB ' ,' <B' U ;A' ;U< <2=' 0; B D;A' ' A 0' DA; D' 2 B' 0' F B00 D' A, =6' 1 < B<EB :' ;AB' <,=' ;<' ;AB' H =DB' A,0', ' > < ;> ,;B' FB?>2 , ;@7' 0;B,=' < ' , D'0; , DA;' < ' ;0' D<,2' ;' <EB 0A<<;0' ;:' ' < =B ' ;<' =B0?B =' ;AB' 02<FB' ,;' , ' B,0@' F< ;:' , =' ;AB ' ?< B0' H,? ' ,2< D' ;AB' EB ' H, ' < ' ,' M>, ;B ' < ' ,' 2B6' AB' ?,E,2 @' , =' D> 0:' < ?B=' ;<' BBF' ;<' ;AB' <,=' HB?,>0B' ;AB' A 220 =B' U,0' ;<<' 0;BBF' < ' ;AB :' A,=' ;<' ?<EB ' ;U<' 0 =B0' < ' ,' ; , D2B' U ;A' ,' 0A, F' ;> ' ,;' ;AB' ,FBW:' UA ?A' =B2,@B=' ;AB ' ;B H2@6' <' ,==' ;<' ;AB' ; <>H2B' , ' , ; 22B @' ?, 00< ' U,0' >F0B;' ,;' ,' 0A, F' ;> :' , =' ;<< ' >?A' ; <>H2B' ;<' DA;' , =' 0B =' < U, =6' A>0' ;' ?A, ?B=' ;A,;' ;AB' ?<EB D' , ; @' UB B' = EB ' =<U ' ??<0B' ;<' ;AB' H =DB' HB < B' ;AB' , 8,=< B0' , =' ;AB' 2,0;' < ' ;AB' D> 0' A,=' ? <00B=' ;AB' EB 6' AB' B; B,;' < ' ;AB' ;A BB' $; 0A' H,;;,2 < 0' A,=' HBB ' <0;' FB 2<>07' ,;' < B' < B ;' ,' U D' < ' ;AB' O =' <> =' ;AB 0B2EB0' ?AB? B=' H@' ,' E B@, =' U,22' ;B ' BB;' A DA:' EA 2B' ;AB' " B ?A' UB B' F B00 D' A, =' < ' ;AB ' B, 6' AB@' < 2@' B0?,FB=' H@' 0A<E D' ,' 2< D' F, ;' < ' ;' <EB ' H@' 0ABB ' 0; B D;A V < ;> ,;B2@:' 2 B' ,22' <;AB ' U,220' ' ;A 0' F, ;' < ' +< ;>D,2:' ;' U,0' ,=B' < ' = @' 2,;' 0;< B0' U ;A<>;' < ;, 6' " ,22@' ;AB' O =:' ;AB' 2B0:' , =' F, ;' < ' ;AB' =' UB B' ,00B=' < ' ,' 2< D' <22' ?<EB B=' U ;A' F B ; 8BB0:' UA ?A' 2 B0' ,H<EB' ;AB' H =DB' , =' ?< F2B;B2@' ,0 0' ;' ,D, 0;' , ' ,;;,? ' < ' ,H<EB6' & A 2B' ;AB@' AB2=' :' ,> > =' , DB=' ;AB' D> 0' , =' ;AB' , ,=< B0' < ' ;AB' 02<FB0' >F< ' ;AB' <;AB ' 0 =B:' 0<' ,0' ;<' ?< , =' ;AB' F,00,DB' UAB ' ;AB' B0;' < ' ;AB' ; <<F0' 0A<>2=' A,EB' ;<' ? <006' B' ;AB ' HBD, ' ;<' U ;A= ,U' ;AB' O =:' , =' F, ;' < ' ;A,;' H,;;,2 < ' A,=' ,2 B,=@' ? <00B=' ;AB' U,;B :' UAB ' EB' ?< F, B0' < ' ;AB' =:' UA ?A' A,=' <??>F B=' ;AB' BW; B B' DA;' U D' < ' ;AB' = E 0 < :' UB B' 0BB ' A,0;B D' ,2< D' ;AB' EB ' H, ' 0< B' U,@' ,H<EB' ;AB' H =DB6' AB@' A,=' AB2=' <>;' ,' 2 ;;2B' ;<<' 2< D' < ' ;AB' 02<FB0' ,H<EB:' , =' 0BB B=' 2 B2@' ;<' HB' ?>;' < :' < ' ;AB' " B ?A:' <; D' ;AB ' F<0 ; < :' ,=B' ,' E D< <>0' B < ;:' , =' ?, B=' ;AB' <22' UA ?A' F <;B?;B=' ;AB ' 2 B' < ' B; B,;' ;<' ;AB' F< ;' < ' F,00,DB6' A 0' U,0' ,' =B0FB ,;B' ? 0 0:' H>;' 0>?A' U,0' ;AB' 0F2B = =' ?<> ,DB' , =' ; ,; EB' < ' ;AB' BD B ;,2' < ?B 0' < ' ;AB' % DA;' * E 0 < ' ;A,;' ;AB' = 0,0;B ' U,0' ,EB ;B=6' ;' < B' F< ;' $B? U ;A:

P # (#' "' %1 # * A$ 4' /N

?<2< B2' < ' ;AB' 2BO:' ,;' , <;AB ' 1 ,N< ' 1 ?%B<=' < ' ;AB' O =:' ?,22B=' < ' ;AB' = 0< =B B=' ,00' < ' B :' UA<' A,=' HBB ' = EB ' H,? ' ;<' ;AB' H =DB' AB,=:' ;<' ?A, DB' ,D, ' , =' 0,EB' ;AB' =:' AB' 0<2= B 0' D ,0FB=' ;AB' 0 ;>,; < :' ?ABB B=' , =' <22<UB=7' ;AB@' B?,F;> B=' ;AB' <22' ;A,;' ;AB@' A,=' N>0;' 2<0;:' , =' AB2=' ;' < ' ;B ' >;BO' < B:' D, D' ; B' < ' ;AB' ?< F, BO' < ' ;AB' =' ;<' F,00' HBA =' , =' ? <00' ;AB' H =DB6' K') <' < B' F B0B ;:8' U <;B' , ' B@B U ; B00:' K ?, ' , 2' ;<' B B HB ' ;AB' D,22, ; @' < ' 1 ,N< ' 1 ?%B<=6' <U' B ;AB ' AB' < ' A 0' A< 0B' B0?,FB=' HB D' H2<U ' ;<' ,;< 0:' UA 2B' ' ;A 0' =, D' , B ' AB' ?A, DB=' < ' A< 0BH,? ' ,;' ;AB' AB,=' < ' 0< B' ' 0 0AB 0' < ' ;AB' O =' , =' 5 ;A' WB=' ;<DB;AB :' , =' AB,=B=' ;AB ' ' , D' ,' =,0A' ,;' ;AB' 2 B' < ' " B ?A' , ; @:' UA< ' UB' = 02<=DB=:' ' , ' ,;' ,' 2<00' ;<' ,D B6' ;' U,0' < B' < ' ;A<0B' BW; ,< = , @' B0?,FB0' EA ?A' ;B =' ;<' F2, ;' ' ;AB' =' 0< B' , ;A' ' ;AB' =<?; B' < ' , ;,2 ;@

AB' < B ;' ;A,;' ;AB' P =' UB B' 0, B:' ;AB' ; <<FO' < ' ;AB' <22' BE,?>,;B=' ;:' , =' ? <00B=' ;AB' H =DB' HBA =' ;AB ' ,;' >22' 0FBB=:' UA 2B' ;AB' " B ?A' B<??>F B=' ;AB' U<<=B=' B B ?B6' ') B@' A,=' HBB ' U 0B' AB' U<>2=' A,EB' 0;<FFB=' ,;' ;A 0' < B ;:' , =' A,EB' ?< ;B ;B=' A 0B2 ' U ;A' A,E D' = EB ' ' ;AB' % DA;' * E 0 < ' U ;A' ,' 2<00' < ' ' B :' UA 2B' A 0' <U ' ; <<FO' A,=' 0> B B=' ?< F, ,; EB2@' 2 ;;2B6' $>;:' ?, B=' ,U,@' H@' ;AB' BW? ;BY B ;' < ' E ?;< @:' AB' B0<2EB=' ;<' 0;< ' ;AB' H =DB:' ;A D' ;A,;' ;AB' $; 0A' ; <<FO' UB B' ;<<' >?A' 0A, B ' =' = 0< =B B=' ;<' , B' , <;AB ' 0;, =:' BEB ' ' ,' 0; < D' F<0 ; < 6' AB B' UB B' F2B ;@' < ' BW, F2B0' ' B?B ;' " B ?A' 2 ;, @' A 0;< @:' < ' %<= ' ;<' #HB 0HB D:' UAB B' F,00,DB0' A,=' HBB ' < ?B=' > =B ' = ?>2; B0' ,0' D B,;6' ??< = D2@' AB' < =B B=' ;AB' PP;A:' ;AB' 2B,= D' BD B ;' < ' %< 0< 80' = E 0 < :' ;<' F>0A' < ' , =' ? <00' ;AB' EB 6' A 0' U,0' ,' = B' 0;, B6' ,> > =' ,2 B,=@' A,=' ;AB' , ,=< B0' ' F<0 ; < ' HBA =' 0;< B' U,220' ,' 2 ;;2B' ,H<EB' ;AB' H =DB:' , =' <00800' D> 0' F2,?B=' ,? <00' ;AB' <,=' 0<' ,0' ;<' 0UBBF' ;' < ' B =' ;<' B =6' AB' $; 0A' H,;;,2 < 0' UB B' <' 0<< B ' ,? <00' ;AB' EB ' ;A, ' ;AB@' HBD, ' ;<' 0; D' ;AB 0B2EB0' <>;' HBA =' ;AB' <? 0' , =' U,220:' UA ?A' 2 B' ' ,' 0< ;' < ' 0 ,22' , FA ;AB,; B' < ' ;AB' 02<FB' ?< , = D' ;AB' F,00,DB6' AB' H =DB:' ,' ;U< , ?AB=' 0; >?;> B' 0BEB ;@' @, =0' 2< D:' ? <00B0' ;AB' <,' = ,D< ,22@:' ,;' ,' F< ;' UAB B' ;' 0' , <UB=' =<U ' HB;UBB ' <? 0:' , =' 2<U0' EB @' B ?B2@6 ;' U,0' 2<<=B=' ,;'

T %B,?A80' I% (%(' FF6' O5 6

S 1 $ ' "' #'

;A 0' < B ;' < ' ;AB' , ' < ' ;AB' F BE <>0' DA;:' , =' U,0' 0UB22 D' 0; 22:' < ' ,' ; <F ?, 2' 0;< ' A, =' N>0;' HBD> ' , =' ,DB=' ,;' ;B E,20' ;A <>DA<>;' ;AB' , ;B << 6' AB' ?, E, 2 @:' >0B2B00' , ;' ;AB' H =DB:' U,0' 0B ;' >F 0; B, ' ;<' U, ;?A' 0< B' = ?>2;' < =0' B, ' 2EB B <06

AB' " B ?A' PP;A:' < =B B=' H@' ;AB' 1 , 0A, 2' ;<' ?, @' ;AB' H =DB:' < B=' ;0' D B ,= B 0' < ' ;AB' <22:' ;<' 2B, =' ;AB' ?<2> :' , =' ;AB ' ?A, DB=' , ;' ;AB' F,00, DB6' $>;' ;AB' 2B, = D' ?< F, @' U,0' <U ' =<U :' HB < B' ;' A, =' D<;' A, 2 ' U, @' , ? <00:' H@' ,' ?< Y ?B ; , ;B=' >0 B; @' 0, 2E<' < ' ;AB' A 220 =B' ' < ;:' , =' ;AB' B 2, = D' B' < ' ;AB' D> 0' < ' ;AB' DA;6' AB' ?<2> ' H < B:' , =' ;AB' B ' B?< 2B=' , =' = 0FB 0B=' , < D' ;AB' <? 0' , =' ; BB0' H@' ;AB' H, :' < ' UAB ?B' ;AB@' <FB B=' ,' B ?B' H>;' B B?; EB' B' >F< ' ;AB' UB22 0AB2;B B=' $; 0A' H, ; ; , 2 < 06') B@:' UA<' A, =' <U' 2<0;' A 0' ;B FB :' < =B B=' >F' ,' = ' 3 ' . %3 '% < ' 2 DA;' , ; @' T' UA ?A' A, =' = 0; D> 0AB=' ;0B2 ' , ;' ;AB' 0 BDB' < ' >=, =' <= D<:' , =' ;<2=' A 0' , =B' =B' ?, F' F D2 ' ;<' ; , B' ;AB' ?< , =' , =' ? <00' , ;' , 22' ?<0;0' AB B' B 0>B=' ,' <0;' D, 22, ;' B < ;' , =' ,' A =B<>0' H>;?AB @6' AB' A, 00B> 0' 2> D' ;AB 0B2EB0' , ;' ;AB' H =DB:' , =' F>0AB=' < ' ; 22' ;' U,0' , H0<2>;B2@' H2<? B=' H@' ;AB' H<= B0' < ' ;AB' 22B=' , =' ;AB' U<> =B=:' , =' ; 22' ;AB@' ;AB 0B2EB ' A, =' HBB ' , 2 <0;' 2 ;B , 22@' BW;B , ;B=:' < ' <>;' < ' ,' H, ; ; , 2 < ' < ' 2 ; ;2B' < B' ;A, ' ' B ' 5 ' UB B' 22B=' , =' 04' U<> =B=' ' 2B00' ;A, ' ;B ' >;B06' ' BU' 0> E E< 0' , ?;>, 22@' ? <00B=' ;AB' H =DB:' , =' ;A BU' ;AB 0B2EB0' =<U ' , < D' ;AB' <? 0' , ;' ;0' UB0;B ' B =:' UAB B' ;AB@' ;<< ' 0AB2;B ' < ' ;AB' $; 0A' B' ' ,' 2 ; ;2B' ?< B ' < '=B, =' D <> =:' H>;' ?<>2=' < ' ?<> 0B' , B' <' > ;AB ' , ; ;B F;' ;<' , =E, ?B6

T' AB' # ((%: (' .%' 3 ' 9 %5%' < B=' < ' F ? B=' , 0 B ' < ' ,22' ;2 B' BD B ;0' < ';AB' P';A' < F06

T' A, ;') B@' A 0B2 ' U, 0' ;AB' FB 0< ' B0F< 0 H2B' < ' ;A 0' ,=' , =EB ;> B' 0BB 0' F <EB=' H@' ;AB' N<> ,2' < ' F D2 :' UA<' U ;B0' K' ' = 'NB' B >0' =B' 1 6' 2B' 1 , B?A, 2' 2> B B' 8< = B' =8B F< ;B ' .' ' :") 6' 2B' F< ;' =B' 2, ' <, :' =8<>' =B>W' ?< F, D B0' =B' (B , = B 0' EB , B ;' =8B; B' BF<>00B06' C8, E, 0' ' A< B0' T' NB' < ,;' < ' H, ; , 22< ' B ' ?<2<> B' B;' , H< =, ' 2B0' D2, 0' , ' 2, ' H, < B; ;B:' B;' , >' ? ' =B' H 2%' 'T)% %: ' %B' F< ;' >;' B F< ;B:' , 0' N8B>0' 0' < ? B 0' B;' P' 0<2=, ;0' ;>B0:' B;' ' < ? B 0' B;' OO' 0<2=, ;0' H2B00B06' %B' ' 2B' H, ; , 22< :' ; , ;' =B; > ;:' >;' = 00<>06' A, ;' ;AB' H =DB' U, 0' K' B F< ;B' 8 ' , @' <;AB ' 0B 0B' ;A, ' ;A, ;' , ' 0?< B' < ' 0<' < ' 0> E E< 0' D<;' ;<' ;2 B' <;AB ' 0 =B:' , =' ;AB ' B;> B=:' 0' < '?<> 0B' > ; >B6' F > D2 >:' F6' O 56

S H ; 4 P

A, EB 2<0;0 W;@ < ?B 0: < UA< ;AB@ H> B= ;UB>;@ <> < ;AB H, ;;2B B2=: ,H<>;0 =B, = , =4 U<> =B= 68 FF, B ;2@ ;AB0B K= 0F, ;?AB0 , B , EB ; < < 1,00B ,80 <U 6 ;0 ? B= H2B ;A, ;, @ $; 0A < ?B ?, A, EB U ;;B 0>?A 0;> , ;B , ?< H, ;< UA ?A BEB @ , F B0B ;U,0 F, ; ?>2, 2@ F <>=: , = UA ?A ;AB 2<00B0 A, = HBB ? B= H2@ 0 ,22: ?<

; ;0 , ?> <>0 ,?;;A, ; >;AB = , ; < 1,00B>,80 = 0F, ;?A ;AB @ # 2%(' . : (' %. %3 8 : % % UB ,?;>,22@ ?, ;?A A ;AB ,?;; < ,20 @ D B;> 06 2 B B 0 0;U ;;B K) <>0 2B> ,E< 0 F 0 A< ,B0 B;=B>W F B?B0 =B?, < 6) <; B FB ;B, B;B=B F B0 =B A< B0 ; , ;>B0 M>B H2B00B068 AB ;AB D> B0 , B0?, ;?AB= <>;, = ,H<EB 0 0B ;B= K> = ,FB, > B;O A< B0:8 UA 2B < ;AB " B ?A 2<00 P 0 0?, ;?AB= <>;, = 0B ;B=6) B@: UA<0B = 0F, ;?A U,0 2@ D HB < B 1,00B ,: 2 , = A< B0;2@ U ;;B ;A, ; , > > = K, B;B ?A,00B =B 0, F<0 ; < ,EB?>>B FB ;B ?< 0 =B ,H2B =B ;>B0 B; =B H2B00B0: <>0 2> ,E< 0 , ; B> <>; B > B ?B ; , B =B F 0< B 068) B@ BF< ;B= ,20< , 2<00 < ,H<>; B : UA ?A 1,00B , =B2 HB , ;B2@ ?>; =<U ;< 6 $B2 ,0 I 6 45 A,0 BF2, ?B= ;AB DB > B D> B0 A 0 BF ; < 1,00B ,80 = 0F, ;?A: ;A<>DA H<;A ;AB = , ; ;AB @ # 2%(, = ;AB < D ,2 F>H2 ?, ; < > ;AB '%: D EB ;AB ,20 ?, ; < 06 1,00B , 0, @0 <>DA; < ;AB ?AB? , ; ;AB H =DB: ;A<>DA) B@ A< B0;2@ U <;B K, > =B2, = > <, > B B0B EB M>8 2 ,E, ; 2> FB 0 =B 0B B?<> , ; B: B; 2?< ; >B 0, B; , ;B 0> + AB2 2, > ; => O68 0 ;< ;AB D> 0 ?, F;> B=: ; U,0 FB B?;2@ ; >B ;A, ; 0< B ?, < UB B ; , B ;A, ; =, @: H>; <; DA; D: < < , > > =6 2B D<EB < < 2 B =, U,0 <> ; D ;U< 0 ,22 D> 0 IO F<> =B 0J < , U = 22 0< B U, @ <>;0 =B ;AB D2, ? 06 2 B@ A, = <; HBB D<; >F ;< ;AB F<0 ; < : H>; UB B 2@ D HB2<U V B <EB= < ;AB ?, , DB0: < =B ; < HB 02> D >F < B B, 0 2@ < ; < ;AB << 6 2 B 22 U,0 , H, =< B= UAB) B@ ?, B >F: , = ;AB = 0 <> ;B= ?, < B22 ; < A 0 A, =06 B 0, = <; , U< = < ; ;AB : , @ < B ;A, AB = = < ;AB , D , @ 2, D , 22BDB= H@ 1,00= , ; < A, EB HBB ?, F;> B=6 $>; ;AB + ?B < #002 D H <>DA; H<;A: ; < F2B, 0B ;AB FB ,2 F, 2, ;B: UA ?A @B, B= < $; 0A 2, D0 , = D> 06 0 = 0F, ;?A: F>H2 0AB= 0< B UBB 0 2, ;B ;AB '%: ?, B ; < , > > =80 A, =0) <EB HB : , = F <E< B= A ; < U ;B , E = ?, ; < < A 0 ?< =>?; , = , ?< ; , = ?; < < K ;AB ,20B ,00B ; < 0 ?< ; , B= 1, 0A, 2 1,00B ,80 BF< ; < , , ?; < UA ?A U,0 <; < 2@ A DA2@ A< <> , H2B ; < ;AB % DA; * E 0 < : H>; F<0 ; EB2@ ;B , ;B= ;0 , E<> : <; U ;A0; , = D ;AB BW; , < = , @ = 0F, ;@ < > HB 06 "< , ?< F0 < O: B FB < B=: > ;AB , ?B < , , @ < O: : < B < ;AB <0; = ?>2; <FB , ; < 0 < U, : V , B; B, ; < , H < B , = BW; B Y 0 EB F<0 ; < <EB < B , <U =B 2B: , = =B B =B= => D ;AB UA<2B =, @ ;AB 0; =B B 0 H2B F<0 ; < ;A, ; U,0 ; < HB <> = ;AB B DAH<> A<<= < ;AB F2, ?B UAB B ;AB , ?; < ?< B ?B=68 "< ;AB UA<2B 2B; ;B 0BB 2BW6 , > > =80 < % : : . FF6 O :

PP 2# (8T 1 * A$ 4 CF

0 =B >D ;AB 0 0 ;A , ;A , = HBB F6 "<> < ?B 0: <; ;UB ;@ <> : A , = HBB 22B=: , = < B A , =B F 0< B 6 0;B , = < HB D K ?< F2B;B <>;8 ;AB % DA;* E 0 < A , = B; B= , ;2B 0> B , = > <2B0;B=: U ;A<>;2B , E D BEB , U<> =B= , < , 0 D2B ? , ;HBA =6

& B22 D;< U , 0 N>0;2@ = 0F2B , 0B= U ;A , > > = < , ??BF; D ;A 0 UA<22@ > B?B00 , @ ?< H , ;6 ;AB % DA;* E 0 < A , = HBB U ;A= , U HBA = ;AB <, < ;AB =: , 0 AB A , = , =E 0B=: < =, DB U<>2= A , EB HBB ?> B=: , = ;AB H =DB DA;A , EB HBB =B B =B= U ;A<>; ;AB F B2 , @ B; B , ; ;< ;AB U , ;B 8 0 B=DB6 ! B; 0< D B , ; U , 0 ;AB ?< =B ?B UA ?A , > > = U , 0 AB2= H@ & B22 D;< : ;A , ; ;AB ?< B0F< =B ?B 0A<U0 < H B , < ?< = , 2 ;@ < ;B 0 < < B2 , ; < 0 => D ;AB B 0> D = , @0 ;A<>DA > < ? , 22@ ;AB = E 0 < , 2 DB B , 2 U , 0 , U , B ;A , ; ;AB < , =B A B A , = 0 , FF <EB= A 0 , ?; < : , = B2; ;AB H2 , B ;A , ; U , 0 > 0F< B ; ;AB BB B0; , 0A < AB B U , 0 , <;AB $; 0A DB B , 2 E<2EB= , 0B <>0 =BD BB < ?>2F , H 2 ;@ < ;AB 0a;A6 ;A 0 U , 0 + ?;< : UA< AB , D , ; A 0 F<0; < + AB2 ;AB D ;AB < D: <=B >F ;< ;AB H =DB < ;AB <, 7 ;AB B AB B; , > > =: UA< U , 0 N>0; F BF , D ; < B0 0;) B@8 0 , ; ;B F; ; < ? <00 ;AB EB 6 + ?;< U , 0 , 0 B= ; < H D >F ;AB = * E 0 < 0>FF< ;: UA ?A ?<>2= A , EB HBB =< B 2B00 ;A , ;A BB A<> 0: H>; <>DA2@ B >0B=: 0 , @ D , FF , B ;2@ ;A , ; , > > = DA; DB; <>; < A 0 <U 0? , FB6 AB DB B , 20 F , ;B= , ;B , BW?A , DB < 0< B A , = U< =0: , = + ?;< <=B H , ? ; < =B A 0 = E 0 < ; < DB; B , =@ ; < B; B , : A , E D ?< ; ;B= < B < ; AB D B , ;B0; 2 ; , @ 0 0: ;A , ; < B >0 D ; < 0>FF< ; , ?< , =B ; AB < B ; < =, DB : HB? , >0B AB = = <; ?A<<0B ; < ?< F < 0B A 0 <U ; ; <<F0 ^6

T BB ;AB 2B ; ;B ; < , > > = ; AB 1 () ' #%(= , ;B= C>2@ P , = 46 0 2B ; ;B ; < %< = % EB F<<2 < C>2@ < B 0: =BB=: BW?>0B0 < , > > =6 $>; ; ;A , ; < B @ & B22B02B@ < C>2@ 4: , = 0; 22 < B ;A , ; < A 0 B2 , ; EB +<2B < C>2@ : AB BWF B00B0 EBW , ; < 6 K A , = F<0 Y ; EB2@ < H ==B ;AB <<2 0A , , 0 UA ?A , > > = E<2EB= A 0 <>; Y F<0; 0: 66 6 , = BFB , ;B= @ N> ?; < ; A , ; AB 0A<>2= <; B D , DB , , , < ;AB DA; < ;AB EB 6 6 66 ! <> U 22 0 , @ ; A 0 ? , 0B: & 2 @ <; , ??>0B , > > = Y , 0UB : $B? , >0B , ; < HB A , DB= < ; : ? , <; , ??>0B , , UA< HB2 BEB A , 0 B , ; UB22: , = UA<0B B < U , 0 < B < N>=DB B ; : <; < ; B ; < 6c 6 ^ BB : : . X(3 % FF6 O5 6 A 0 ;B E BU U , 0 =B B= H@ <H 0< A 0 < % R ' I 6 5OJ

?<2< B2' , =' ,' +< ;>D>B0B' H ZN B 7' AB' A , =' U ;A' A ' EB' <;AB ' # D2 0A' < ?B 0:' ,22' ;AB' B0;' < ' ;AB' D, 0< ' HB D' +< ;>D>B0B6' AB B' U,0' , ' , F2B' 0;< B' H<;A' < ' <<=' , =' < ' , > ; < :' UA ?A' & B22 D;< ' A , =' HBB ' F<> D' ' BEB ' 0 ?B' ;AB' 0 BDB' < ' >=, =' <= D<' HBD, 6' 2@' ;U<' 0B <>0' =B B?;0' BW 0;B=' ' ;AB' F2, ?B6' ;AB' 0;' U0 0' ;A, ;' ;0' D2, ? 0' U,0' ;<<' 2<U:' , =' 2B ;' BWF<0B=' , ' > =>2@' 2, DB' F< ; < ' < ' ;AB' U, 220' AB' 0B?< =:' ,' , ' U< 0B' , >2;:' U,0' ;A, ;' ;AB' D , =' ,D, R B' U,0' B0; , H2 0AB=' ' ,' , ;AB ' 2 0@' B= , BE, 2' ?, 0;2B' ' ;AB' ?B ; B' < ' ;AB' ;<U :' , =' U,0' <;' B, 2@' 0<' UB22' F <;B?;B=' ,0' ?<>2=' A, EB' HBB ' =B0 B=6') BEB ;AB2B00' & B22 D;< ' ?, 2?>2, ;B=' ;A, ;' 2 B =, ' 0A<>2=' A<2=' <>;' , ;' 2B, 0;' ,0' 2< D' ,0' >=, =' <= D<:' , =' A, =' 0< B' A<FB' ;A, ;' ;0' 0 BDB' U<>2=' =B; , ' 1 , 00B ,' 0<' >?A' ;A, ;' ;AB' , >;> ' , 0' U<>2=' 0B;' ' HB < B' AB' A, =' ; , B ' ;AB' F2, ?B:' ' UA ?A' ?, 0B' ;AB' E, 0 < ' < ' +< ;>D, 2' U<>2=' , 00> B' ,' ?A, , ?;B ' < ' = ?>2;@' UA ?A' ;' U,0' , ' < ' F B0B ; D' ' >D>0;' < ' BF;B HB 6

"< ' 0< B' =, @0' , ;B ' ;AB' EB0; B ;' < ' 2 B =, ' A, =' HBB ' ?< F2B;B=' ;AB' P;A' < F0' B , B=' M> B0?B ;:' , =' ,=B' < , ;;B F;' ;<' H B, ' D 8<> =' ' < ;' < ' ;AB' F2, ?B6') B@' U,0' U, ; D' < ' ;AB' (, =' +, ' , =' ;AB' ; , :' UA ?A' A, =' <U' 0; , ;B=' ' =B; , ?A B ;0' < ' >=, =' <= D<:' H>;' UB B' , =E, ? D' EB @' 02<U2@' < ' , ??<> ;' < ' ;AB' 2, ? ' < '= , >DA;' , , 206' "< ' ,' < B ;' & B22 D;< ' ;A<>DA;' ;' F<00 H2B' ;A, ;' ;AB' B B @' U,0' , H<>;' ;<' ,0 ' 2 B =, :' , =' ;<' , =E0; ?B' ;<' +< ;>D, 2' U ;A' A 0' , ' , @' U ;A<>;' =B2, @' A 0' A@F<;AB0 0' B?B EB=' 0< B' 0>FF< ;' < ' ;AB' , ?;0' ;A, ;' C> <;' A, =' <EB=' >F' < ' ;AB' D>B=, :' , =' ;A, ;' BJ B ' A, =' 0A<U ' ;AB' AB, =' < ' ,' ?<2> ' HB@< =' ;AB' +, 00' < ' +B , 2B06' A 0' 2, 0;' , FFB, B=' ,' <0;' 0 D ?, ;' <EB B ;7' < ' ';AB' =' < F0' U,0' , H<>;' ;<' , ?A' >F' < ' ;AB' , D>0' ;<

T A 0' ?, B' < ' ;AB' BW; B B' A, = B00' < ' ;AB' 0< 2:' UA ?A' =>?B=' ;AB' H> 2=B 0' < ' ;AB' ;A ?B ;> @ B ?B ;B' ;< F>;' 2B00' B, ;A' ;< ;AB' D2, ? 0' ;A, ' U,0' BB=B=:' 0 ?B' ;' A, =' ;< HB' 0? , FB=' >F' , =' ?, B=' < ' ,' D B, ;' = 0;, ?B:' <U D' ;< ;AB' , ?;' ;A, ;' ;AB' ?<, ; D' < ' 0< 2' , 22' , <> =' 0' 0< ;A ' , H<EB' ;AB' <? 6

T & B22 D;< ' ;< 22:' 2EB ?, :' C>2@' 4:' AB B' 0' <;' ;AB' 0 , 22B0;' , FFB, , ?B' < ' ;AB' B B @80' ;B = D' ;< , ;;, ? ' 2 B =, :' , =' ' ?< Y ?2>=B' ;A, ;' ,0' 0<< ' ,0' ;AB@' A, EB' D<;' ;<DB;AB ' ;AB ' < ?B:' ;AB@' U 22' , B' ,' =, 0A , ;' >0:' , =' B =B, E<> ' ;< , B' <> ' B; B, ;' ,0' = ?>2;' ,0' F<00 H2B68

N< ' 1,00B ,:' ;2 B' =B=>?; < ' U,0' ;A,;' ;' U,0' BM> B=' ;<' N< ' ' ,' DB B ,2' E,0 < :' 0 ?B' ;' U,0' ?2B, ' ;A,;' ;' U,0' <;' BB=B=' < ' ;AB' B B' 0 BDB' < ' 2 B =,6' &B22 D;< ' ,??< = D2@' U <;B' ;<' > DB' 22' ;<' BBF' ,' <0;' E D 2, ;' B@B' < ' B@ B :', =' ;<' HB' B,=@' ;<' <EB' >F' ;<' ;AB' . < =BD<' ;AB' < B ;' ;A,;' ;' U,0' ?B ;, ' ;A,;' A 0' <FF< B ;' A,=' F,00B=' ;AB' B ,' =B' (,;,' , =' 2 B=' A 0B2 ' ;<' ;AB' , ' " B ?A' , @6' 0' ,' ,;;B ' < ' ,?;' ;AB B' U,0:' ,0' @B;:' <' =, DB ' < ' B@ B 6' AB' ,=E, ?B' < ' < B' < ' A 0' 2, D' =B;,?A B ;0' ;<'),E,0' " ,0' HB@< =' ;AB' +,00' < ' +B ,2B0:' , =' ,' , =' ,=B' >F< ' +B , ,?< ' < ' C>2@' ' , =' >F< ' 1< 0, ;<' < ' >D>0;' :' H@' , <;AB :' UB B' F> B' ,;;B 0' < ' < ,D D' , =' B?< ,00, ?B:' B@ B ' A,=' <' < =B 0' ;<' <EB' >F' A 0' UA<2B' < ?B' ;<' N< ' 1,00B ,:' , =' U,0' < 2@' , >0 D' A Y 0B2 ' H@' =B < 0; ,; < 06' 0' ,?; < 0' HB?, B' <0;' F>RR2 D' ;<' &B22 D;< ' UAB :' ,' BU' =,@0' 2,;B :' AB' ?,22B=' H,? ' ,22' ;AB' ; <<F0' ;A,;' A,=' <EB=' < ;AU, =:' , =' ?< ?B ; ,;B=' A 0' < ?B' ,;' 3, R,' 2,' 1,@< :' < ' ;AB' <,=' ;<' (,0;B22<' $, ?<:' 0<' ,0' ;<' ;A B,;B ' < ?B' < B' ;<' E,=B' B ; ,2' +< ;>D,2' H@' ;AB' 2 B' < ' ;AB' ,D>06' A 0' U,0' <' =BE ?B' < ' A 0' <U :' H>;' ;AB' B0>2;' < ' ,' = 0F,;?A' < ' 1,00B ,' =,;B=' C>2@' 4:' < =B D' A ' ;<' BBF' < B' ;<' ;AB' 0<>;A' < ' ;AB' F B0B ;:' ;<' ;A B,;B ' H , ;B0:' , =' ;<' , < =' '' <' ?A, ?B' < 'N< D' &B22 D;< 6

B@ B 8' B ;0' B, UA 2B' A,=' D EB ' 22' 0< B' ; <>H2B7' ;AB' ,FFB, , ?B' < ' ,' < ;AU, =' <EB' < ' ;AB' F, ;' < ' A 0' ,=EB 0, @' A,=' ?,>0B=' ;AB' $; 0A' DB B ,2' ;<' , B' B,=@' < ' ,' F, ,22B2' , ?A' < ' "> =,<' , =' (>, =,:' 0<' ,0' ;<' ?< B?;' A 0B2 ' U ;A' A 0' ?A B 6' B' ; , 0 B B=' A 0' AB,=' M>, ;B 0' 0;' < ' (,0;B22<' $, ?<' ;<' , RB=,0:' , =' ;AB ' < ' , RB=,0' ;<' ;,2,@,:' ,;' ;AB' <<;' < ' ;AB' F,00' ;A,;' 2B,=0' ;<' ;AB' 1< =BD<' E,22B@:' ;B = D' ;<' ? <00' ;AB' <> ;, 0' ;AB' < B ;' ;A,;' B@ B ' A,=' F,00B=' <EB ' ;AB' +B ,2B0' =B 2B0' U ;A' A 0' , ' H<=@6' $>;' 0BB D' ;AB' =' < F0' > BWFB?;B=2@' ;> D' H,? ' , =' ?< ?B ; ,; D' ,;' 3, R,:' 22' ,20<' B; ,?B=' A 0' 0;BF0:' , =' 2,@' ,;' , RB=,0' ,D, ' < ' >D>0;' =' ; 22' BF;B HB ' 0;:' U ;A' A 0' ,=E, ?B=' D>, =' ,;' (,0;B22<' $, ?<' , =' A 0' ?,E,2 @' UB22' <>;' ;<' ;AB' < ;' ,2< D' ;AB' F, 0A' < ; B :' U,;?A D' BEB @' <EB B ;' < ' ;AB' =' < F06' *> D' ;A 0' ; B' < ' U, ; D' ;AB' +< ;>D>B0B' ?,E,2 @' < ' A 0' = E 0 < ' A,=' ;U< 0 ,22' H>;' 0>??B00 >2' B D,DB B ;0' U ;A' B@ B 8' A< 0B:' < ' UA< ' ;AB@' ?>;' >F' ,' 0M>,= < ' < ' ;AB' =' <

, ; , H , ' A 220:') < ;AB ' +< ;>D , 2' , =' (, 2 ? ,' UB B' 2B ;' > = 0;> HB=' ' BF;B HB 6

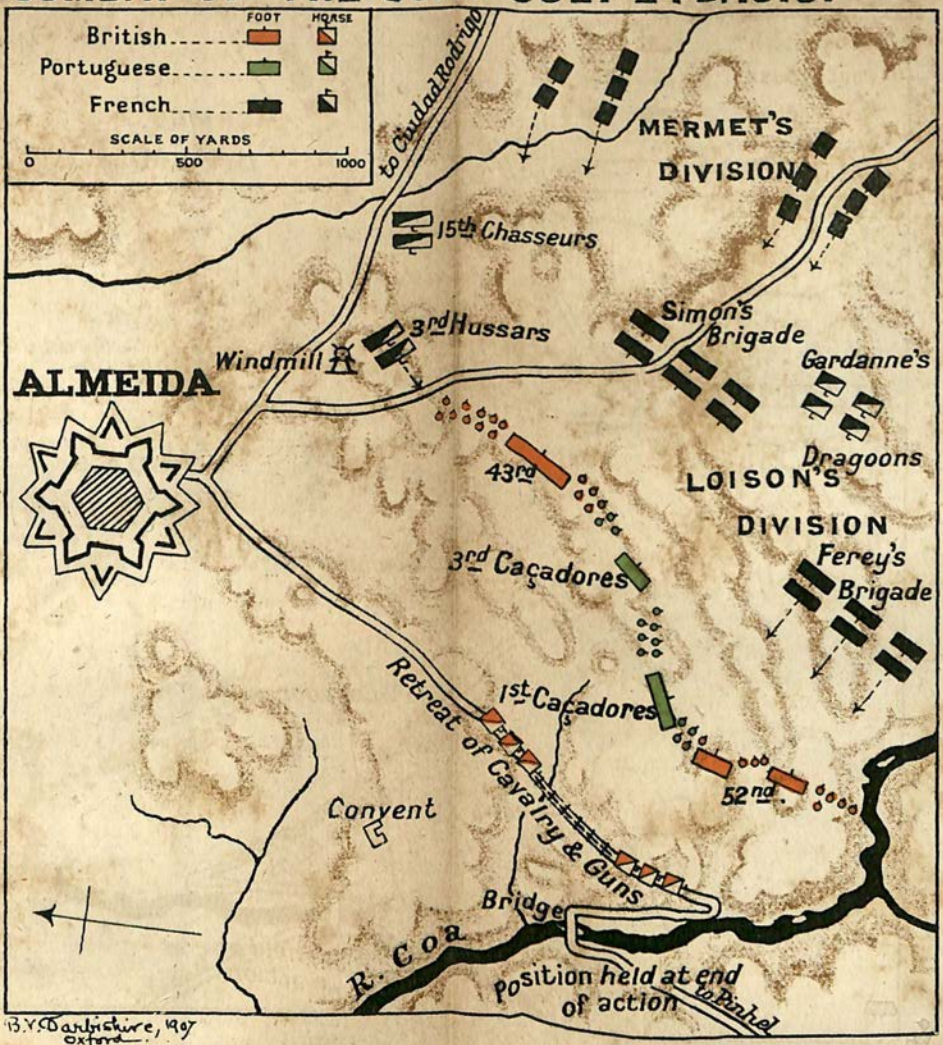
& A 2B' D2 , ? D' , ;' ;AB' 0>H0 = , @' <FB , ; < 0' ' ;A 0' B <;B' ?< B ' < ' F , :' ;' ,@' HB' U< ;A' UA 2B' ;<' <;B:' ,0' ,' F << ' < ' ;AB' 02 DA;' A<2=' UA ?A' $< B;' , =' B ,0' F<00B00B=' < ' ;AB ' , 22<; ; B=' = 0; ?;0:' ;A , ;' < 'C> B' 4' 1 , A@' ;A B , ;B B=' 0;< D , :' UA 2B' ;AB' 0;> , ' H , =0' < ' <2< B2' $, ?B , :' B2>= D' $< B;:' ?, B' =<U ' ;< ;AB' F2 , 0' H@' ;AB' + , 00' < ' + , N , B0' , =' 0> F 0B=' %B< ' AB@' D<;' ;<' ;AB' ;<U ' H@' B0?, 2, =B' , ;' DA;:' AB2=' ;' < ' ;U< =, @0:' , =' < 2@' BE , ?> , ; B=' ;' UAB ' B ,0' ?, B' >F' ' 0; B D;A' < ' C> B' 56' + <E< B=' , ;' ;A 0' H<2=' , =EB ;> B6' $< B;' , =B' A 0' 2, 0;' , ; ; B F;' ;<' ?< M>B ' & B0;B ' 0;> ,0:' , =' 0<' ;<' =B0; <@' ;AB' =B , ; D , H2B' , =' BE , 0 EB' F , ; 0 , 0' ' A 0' < ;6' B' < ?B=' A 0' U , @' , ? <00' ;AB') , ?B , ' , =' ;AB') , E , :' , =' A 0' E , D>, =' A , =' B , ?AB=' , 0; <F<2:' < ' ;AB' (, 2 ? , ' H< =B :' >F< ' C>2@' :' UAB ' AB' AB , =' ;<' A 0' = 0D>0;' ;A , ;' ;AB' B B @' A , =' 02 FFB=' HBA =' A 6' $, ?B ,' U , 0' ;A B , ;B D' A 0' H , 0B' , ;' E B=<:' UA 2B' +< 2 B 80' H , =:' ?, B=' <> =' H@' # D2 0A' 0A F0:' A , =' 2 , =B=' B , '%2 , B0' , =' ?>;' ;AB' ?< > ?, ; < ' U ;A' , ; , =B 6' AB0B' ?2BEB ' <EB0' H <>DA;' $< B;' H , ? ' ' A , 0; B' 6' AB' BE , ?> , ; B=' & B0; B ' 0;> ,0:' ? , 22B=' >F' B ,0' ;<' A 0' , =:' , =' U , 0' B D , DB=' ' >D>0;' , =' BF;B HB ' ' ;AB' A> ;' , ;B ' +< 2 B ' UA ?A' UB' A , EB' , 2 B , =@' B ; < B= $>;' ;<' B;> ' ;<' ;AB' , ' <?>0' < ' ;AB' U , ' ' ;AB') < ;A6' ' >D>0;' ;A') B@80' ; <<F0:' A , E D' , ;' 2 , 0;' B?B EB=' ;AB' 0 BDB ' ; , ' , =' , ' D<<=' 0>FF2@' < ' > ; < 0' < ' >=, =' <= D<' , =' , 2 , , ?, :' H < B' D <> =' ' < ;' < ' 2 B = , 6' & B22 D;< ' U , 0' >?A' B2 BEB=' , ;' ;AB' BU0:' , 0' ;' U , 0' <U' ??B , ' ;A , ;' 1 , 00B , ' U , 0' , H<>;' ;<' HB0 BDB' ;AB' F2 , ?B:' , =' <;' ;<' , 0 ' ;' , =' , ?A' < U , =' ;<' +< ;>D , 26' AB' < ;' UA ?A' ;AB' B D BB 0' < ' ;AB' P;A' < F0' A , =' ?A<0B ' < ' , ; ; , ? ' U , 0' ;A , ;' , ? D' ;AB' H , 0; < ' < ' , ' +B= <' < ' ;AB' 0<>;A B , 0;' < ;' < ' ;AB' ;<U 6' AB' 0;' F , , 22B2' U , 0' = , U ' , ;' , ' = 0; , ?B' < ' < 2@' ' @ , =0' < ' ;AB' U , 2207' ;' U , 0' <> =' EB @' = ?>2;' ;<' ?< F2B;B:' <U D' ;<' ;AB' 0A , 22<U B00' < ' ;AB

T' "< ' ,' , , ; EB' < ';AB0B' <H0?> B' ?, F , D 0' 0BB' ?A , 22B 80' 9 : 2% (': ' % ' & = : 5% (' FF6' 5 46

T' BB' H =6:' FF6' 6

^ "< ' ,' , , ; EB' < ' ;AB0B' ;B B0; D' H>;' <H0?> B' <EB B ;0:' 0BB' $?ABFB2B :' 6 P5P 56' ;' 0' F<00 H2B' ;<' D EB' ,' >22' , ??<> ;' < ' ;AB ' AB B:' A>;' B?B00 , @' ;<' B ; < ' ;AB :' ;<' 0A<U' ;AB' 0@FAB , ' ?A , , ?;B ' < ' $< B;80' ; , 0 6

COMBAT OF THE COA. JULY 24TH. 1810.



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UA<2B' 0;< B:' , =' ';U<' 0B?< =0' ;AB' ?,0;2B:' ;AB' ?, ;AB= ,2' ,;' ;0' 0 =B:' , =' ;AB' UA<2B' ?B ; ,2' F< ; < ' < ';AB' ;<U ' A,=' HBB ' H2,0;B=' <>;' < ' BW 0;B ?B6 K' AB' B, ;A' ; B H2B=:8' U<;B' ,' " B ?A' B@BY U ; B00:' K', =' UB' 0,U' , ' B 0B' UA 2U =' < ' B' , =' 0 < B' 0B' < ';AB' ==2B' < ';AB' F2,?B6 ;' U,0' 2 B' ;AB' H> 0; D' < ' ,' E<2?, <V < B' < ';AB';A D0';A,;' '?, ' BEB ' < DB;', ;B ';UB ;@ ' 0 W@B, 06 # < <>0' H2<? 0' < '0;< B' UB B' A> 2B=' ;< ';AB'; B ?AB0:' UAB B' ;AB@' 22B=' , =' U<> =B=' 0< B' < ' <> ' B 6 (> 0' < ' AB,E@' ?,2 H B' UB B' 2 ;B=' < ' ;AB' , F, ;0' , =' A> 2B=' =<U ' , ' <>;0 =B' ;AB 6 & AB ';AB' 0 < B' ?2B, B=' < :' ,' D B,;' F, T;' < ' 2 B =,' H,=' = 0,FFB, B=:' , =' ;AB' B0;' U,0' ,' AB,F' < ' =BH 0' " EB' A> = B=' < ';AB' D, 0< ' FB 0AB=:' ?2>= D' B, 2@' BEB @' , ' < ';AB' ;U<' A> = B=' , ; 22B @ B ' UA<' UB B' 0B E D' ;AB' D> 0' M ';AB' < ;' < ' ,;;,? 6 < B' A,H;, ;0' UB B' 22B=:' H>;' <;' , @:' < ' ;AB' ,N< ;@' A,=' ;, B ' B >DB' ' ;AB' ?,0B ,;B0' UAB ' ;AB' H< H, = B ;' HBD, ' ;A,;' < D6 ;' U,0' ;AB' > < ;> ,;B' 0<2= B 0' UA<' UB B' , D' ;AB' U,220' ;A,;' 0> B B=6 "B, D' ;A,;' ;AB' " B ?A' DA;' 0B RB' ;AB' < B ;' < ' , ' B0?,2,=B:' (B B ,2' <W' , ' ;<' ;AB' , F, ;0' , =:' ,00 0;B=' H@' ,' +< ;>D>B0B' , ; 22B @' < ?B :' 2<,=B=' , =' B=' ;<' ;AB' ; B ?AB0' 0< B' < ';AB' BU' D> 0' < ';AB' 0<>;A' < ;' UA ?A' UB B' <;' = 0,H2B=6 B' ;> B=' <>;' ;AB' UA<2B' D, 0< :' , =' BF;' ;AB ' > =B ' , 0' ;A,;' DA;:' 2@ D' HBA =' ;AB' U,220' ' BWFB?;,; < ' < ' , ' ,00,>2;' UA ?A' BEB ' ?, B6 AB' < D' 2 DA;' B ,H2B=' A ' ;<' B,2 RB' ;AB' >22' BW;B ;' < ' ;AB' = 0,0;B 7' ;AB' H,0; < 0' , =' ?> ;, 0' A,=' 0> B B=' 2 ;;2B:' ;AB' 0AB22:' 0< ;<' 0FB, :' < ' ;AB' ;<U ' U,0' 0; 22' ;,?;:' , =' ;AB' ?,0B ,;B0' A,=' 0;<<=' :' H>;' BEB @;A D' U ;A ' ;AB' B ?B ;B' U,0' U B? B=6 2@' EB' A<>0B0' ' ;AB' F2,?B' A,=' BF;' ;AB ' << 0G' ;AB' ?,0;2B' U,0' ,' =BBF' A<2B:' 2 B' ;AB' ? ,;B ' < ' ,' E<2?, <G' ;AB' 0; BB;0' UB B' ,H0<2>;B2@' H2<? B=' U ;A' > 0:' 0<' ;A,;' ;AB B' U,0' <' D< D' < ' F2,?B' ;<' F2,?B' 0,EB' ,2< D' ;AB' , F, ;06 AB B' UB B' 0; 22' O: ' B ' > =B ' , 07' H>;' ;AB' < ?B ' ?< , = D' ;AB' , ; 22B 8@' BF< ;B=' ;A,;' ;A ;@ B' H, B20' < ' F<U=B :' , =' ,' BU' A> = B=' <> =0' ' ;AB' 0 ,22' BWFB 0B ' ,D,R B0' < ' ;AB' , F, ;0:' UB B' ,22' ;A,;' A,=' B0?,FB=' ;AB' BWF2<0 < 6 A,;' 0' ;<' 0,@:' ;AB B' U,0' <;' F<U=B ' ' ;AB' F2,?B' ;<' BBF' >F' ,' BF2@' < ' < B' =,@' ;<' ;AB' H,;;B B0' < ';AB' HB0 BDB 6 AB' , ; @' A,=' P : ' ?, ; =DB0' ' ;AB ' BD B ;,2' 0;< B0'

T F D2 80' ? : 3' FF6 OOO P6

L ' #) *# ' "' %1 # * S

= EB ' ;AB B BD,=B ,U,@: H@ 0A<;0 ' B?B00, @7 H>;: 2> ' < ' =< D 0<: ;AB@ B ;B B= ;< 2< D ?< EB 0,; < ' U ;A ;AB ' , = ,FF <EB= ;AB ' , D> B ;06 *8 2< ,' B?<D RB;7 0< B <2= ,?M>, ;, ?B , < D ;AB BD>2, 0: , = F2B=DB= A U< = ;< ;AB ' ;A, ;, ' ,00,>2;' U,0 B ;: , = ;A, ;' ;AB@ UB B =<< B= ' ;AB@ ,=B , @ B0 0;, ?B6 8 .A, ;' U,0 0; 22 < B> 2>? @ < ' <W U,0 ;A, ;' ;AB < ?B ' UA< ' AB 0B ;' <>;' ;< ;AB " B ?A ?, F ;< ; B, ;6 1 ,N< ' $, B <0 < ' ;AB , ; 22B @: U,0 < B < ' ;A<0B UA< UB B <0;' ?< E ?B= ;A, ;' > ;AB ' =B B ?B U,0 > ;2B007 AB = E>2DB= ;AB A<FB2B00 0;, ;B < ' ;AB F2, ?B ;< ;AB 1, 0A, 2: , = H, =B A ' F B00 A 0 , ;;, ? ' U ;A<>;' B, : < ' ;AB D, 0< ' U<>2= <;' DA;6 B A 0B2 ' B , B= , ;' ;AB " B ?A AB, = M>, ;B 0: , = = = <;' B;> ' ;< 2 B =, 6 1 ,00? ,: ;AB B < B: 0B ;' H, ? ' ,' H2, ' B >0, 7 < ' ,22 <W8 =B , =0 , = ?< = ; < 0: , = < =B B= ;AB H< H, = B ;' ;< B?< B ?B , ;' 0BEB ' ' ;AB BEB D: UA 2B , FF <, ?AB0 UB B ;A 8<U ' <>;' < ' ;AB 0B?< = F, ,22B7 ;<U, =0 ;AB , F, ;06 ' BBH2B >0 B; @ B ,2< B BF2 B=6

AB B BU, 7 < ' ;AB H< H, = B ;' 0FBB= 2@ H <>DA;' ,;;B 0 0 =B ;AB F2, ?B ;< ,' H ,=6 ' =BF>;, ; < ' < '+< ;>D>B0B < ?B 0: AB, =B= H@ $B , =< * ,' <0;, : ;AB 0B?< = ' ?< , =: E 0 ;B= <W , = < B= A ' ;A, ;' > ;AB ' B0 0;, ?B U,0 ,= B00: , = ;A, ;' ' AB = = <;' , ;' < ?B A< 0;' ;AB UA ;B 2, D ;AB@ U<>2= <FB ' ;AB D, ;B0 ;< ;AB B B @6 AB (<EB < ' U,0 < ?B= ;< @ B2=: , = ?, F ;>2, ;B= , ;' B2BEB ' <8??<? ' < ' ;AB DA;' < ' ;AB 4;A6 1, 00B ,' D , ;B= A ' ;AB ;B 0 ;A, ;' ;AB BD>2, ' ; <<F0 0A<>2= HB 0B ;' ,0 F 0< B 0 ;< " , ?B: UA 2B ;AB ;A BB 2 ; ,' BD B ;0 0A<>2= HB ,22<UB= ;< = 0FB 0B ;< ;AB ' A< B0: < ' D E D ;AB ' F, <2B <;' ;< 0B EB , D, ' => D ;AB U, 6

' ;AB < D < ' ;AB ;A ;AB D, 0< ' , ?AB= <>;' 0; 22 O: ' 0; < D: ;0 ;<; , 7 2<00 => D ;AB 0 BDB A, E D HBB ' 0< B P V B, 2@ ,22 =B0; <@B= ' ;AB BWF2<0 < 6 AB " B ?A A, = 2<0;' ;@ B DA;' 22B= , = ' U<> =B= => D ;AB <FB , ; < 0: AB ?, F ;>2, ; < ' U,0 < 0<< B ' , ; B= ;A, ' ;' U,0 E <2, ;B=6 0;B, = < ' = 0 00 D ;AB 2 ; ,' , = , ?A D < ' ;AB BD>2, 0 ;<U, =0 " , ?B: 1 ,00B ,' BF;' ;AB ' ;<DB;AB : , = 0B;' ;AB B BY D, =B0 =8 2< ,' , = + , F2< ,' ;< ;B F;' ;AB ' ;< B ;B ' ;AB " B ?A 0B E ?B6 AB < ?B 0 UB B F < 0B= ?< , ; < ' < ' ;AB ' , : ;AB B ' UB B E ;B= ;< ?< F, B ;AB B2, ; EB , =E, ; , DB0 <

F 0< ' , =' < ' N< D' ;AB' E ?;< <>0' 0 =B' , =' BBF D' ;AB ' 2 HB ;@6' AB' , D> B ;0' < ' ;AB' ; , ;< 0' 0BB B=' ;<' F BE, 27' ,2 <0;' ;AB' UA<2B' < ' ;AB' BD>2, 0' , =' P ' < ' ;AB' 2 ; ,' 0 D B=' ;AB ' ?< 0B ;' ;<' B 2 0;' E ;A' ;AB' B B @6' AB' B0;' < ' ;AB' 2 ; ,' UB B' ;> B=' 2<<0B:' H>;' =8 2< ,' U,0' ,H2B' ;<' < D, RB' ,' H D,=B' < ' ;A BB' H, ; ; ,2 < 0' ;<' 0B EB' ;AB' # FB < ' ,0' ;AB' K B?< =' +< ;>D>B0B' %BD < ' $>;' ;AB' ;B ; < 0' < ' ;AB0B' =<? 2B' B? > ;0' UB B' M> ;B' <;AB ' ;A, ' 1 ,00B ,' A,=' 0>FF<0B=6' AB@' A,=' ?A, DB=' ;AB ' ,22BD , ?B' B B2@' ' < =B ' ;<' B0?,FB' HB D' 0B ;' ;<' " , ?B:' , =' UA 2B' 2B ;' > D>, =B=' => D' ;AB' BW;' ;A BB' =,@0:' ,H0?< =B=' ' H, =0' < ' ' < ' ' ,;' ,' ; B:' < ?B 0' , =' ,22:' , =' BF;' F B0B ; D' ;AB 0B2EB0' ,;' 2EB ,80' , =' & B22 D;< 80' <>;Y F<0;0:' < ' ,' UBB :' AB' " B ?A:' > =B?B EB=' ;<<' 2, ;B:' = 0, B=' ;AB' BU' B ' B , D' ' ;AB' ?, F:' UA<' UB B' F,? B=6< ' ;<' " , ?B:' ;<' BN< ' <W' , =' ;AB' A,2 =<RB ' < ?B 0' UA<' A,=' 2<@,22@' B >0B=' ;<' ,??BF;' * 8 2< ,80' < B 0' & B22 D;< ' A,=' HBB ' 0< BUA,;' ,2, B=' UAB ' ;AB' 0;' BU0' < ' ;AB' ,=AB0 < ' < ' ;AB' D, 0< ' ;<' ;AB' " B ?A' ?,>0B' B,?AB=' A :' B, D' ;A,;' ;' F2 B=' 0B <>0' = 0, B?; < ' ' ;AB' UA<2B' +< ;>D>B0B' , @ 6 B' U,0' 0<< ' > =B?B EB=' < ' ;A 0' F< ;:' ,0' ;AB' ; <<F0' D ,=>,22@' 0; B, B=' ' ;<' A 0' ?, F' $>;' AB' U,0' ;AB ' 0B RB=' U ;A' D ,EB' =<>H;0' ,0' ;<' UAB;AB ' AB' ?<>2=:' ?< 0 0;B ;2@' U ;A' 2 ; , @' A< <> :' ,??BF;' ;AB' 0B E ?B' < ' ;AB0B' FB N> B=' H>;' F, ; <; ?' FB<F2B6' K' ;' U,0' UB22' B <>DA' < ' ;AB' F E, ;B' B :' H>;' A DA2@' = 0D ,?B >2' ;<' ;AB' ?A, ,?;B ' < ' ;AB' < ?B 0' ^8' AB' <H0B EB=:' , =' U,0' F< =B D' UA,;' 0A<>2=' HB' =< B:' , =' F <F<0 D' ;<' ?,0A B ' ;AB' < ?B 0:' UAB ' AB' B?B EB=' ,' F <?2, , ; < ' < ' ;AB' BDB ?@' ,FF <E D' ;AB' ?< =>?;' < ' ;AB' =B0B ;B 0' , =' B0;< D' ;AB ' ;<' ;AB ' F2, ?B' ' ;AB' , @6' " ,22@' AB' B0<2EB=' ;A, ;:' 0 ?B' 1 ,00B ,' A,=' <HE <>02@' H < B ' ;AB' ?, F ;>2, ; < ' H@' A 0' ,?; < :' ;' DA;' HB' AB2=' ;A, ;

T AB' " 0;' +< ;>D>B0B' %BD < :' UA ?A' 0B EB=' ,D, 0;' >0; ,' ' 5:' U,0' ?< F<0B=' < ' ;AB' ; <<F0' = , ;B=' <>;' < ' ;AB' +B 0>2,' H@' C> <;' ' ' => D' A 0' =< , ; < ' , ;' % 0H< 6

T *8 ' H, 80' = , @' BF< ;0' ;A, ;' O ' B ' , =' ' < ?B 0' < ' ;AB' O;A' < ' ;AB' % B' ?, B' ' HB;UBB ' ;AB' =' , =' O;A' < ' BF;B HB ' ;<' 2EB ,80' <>;Y F<0;0' 7 ,' 0; 22' 2, DB ' > HB ' B,?AB=' & B22 D;< 806

T *8 ' H, 'A,0' <0;' D2<< @' B , 0' < ' ;AB' 0>HNB?;' ' A 0' = , @:' > =B ' ;AB' =, ;B' >D6' 6

K' <' A,06' ;>, ;:' < ' B2< ?<:' >D6' 6

^ <' A,06' ;>, ;:' < ' B2< ?<:' BF;6' 6

S #' ' ' %1 # *

;' U,0' <;' H = D' < ' ;AB' F 0< B 0:' , =' < =B B=' ;AB' 0a;A'
BD B ;' ;<' HB' B < B=' ,;' ;0' AB,=' M>, ;B 0' ,;' $,D, R,6'
AB' 2 ; ,' AB' = 0 00B=' ;<' ;AB ' A< B0:' < ' ;AB' 0? >F2B' ;A,;' ;AB'
" B ?A' A,=' 2B;' 0< B:' ;A<>DA' <;' ,22' < ' ;AB :' D<' BB' , ;B ' ;AB'
?,F ;>2,; < ' AB B' B , B=' ;AB' F <H2B ' < ' UA,;' U,0' ;<' HB'
=< B' U ;A' ;AB' +< ;>D>B0B' < ?B 80' UA<' A,=' F2,@B=' ,' ; B,?AB <>0'
F, ;' < ' ;AB' 4;A:' B0FB? ,22@' $, B <0:' ;AB' BD<; ,;< ' UA<' A,='
HB; 8,@B=' ;AB' 0; ,;B' < ' ;AB' ;<U ' ;<' 1,00B ,:' , =' * ,' <0; ,:' UA<'
A,=' AB,=B=' ;AB' >; <>0' =BF>; , ; < ' ;<' <W:' UA ?A' < ?B=' A '
;<' 0> B =B 6' " ,22@:' ;AB ' , B0' UB B' ??>=B=' U ;A' ;A<0B' < '
;AB' < ?B 0' UA<' A,=' 0B EB=' < ' 1,00B ,80' +< ;>D>B0B' 0; ,' => D'
;AB' ?, F, D :' ' ,' D B,;' = ?; B ;' F2,?B=' HB < B' ,' 0FB? ,2'
?< 00 < ' < ' ; , ;< 0' I?,22B=' ,' ?: ' ' .% .% ' UA ?A'
0,;' ,;' % 0H< ' => D' ;AB' ,>;> 6' 22' < ' * 8 2< ,' =<U Y
U, =0' UB B' =B??2, B=' D> 2;@' < ' A DA' ; B,0< :' , =' ?< =B B=' ;<'
=B,;A' < ' * B?B HB ' :' :' H>;' < 2@' ;U<' UB B' ?,>DA;' , ='
BWB?>;B=V C<,<' =B' 1,0?, B A,0:' < B' < ' =8 2< ,80' , =B0' =B'
?, F:' , =' * ,' <0; ,:' ;AB' 2 B>;B , ; D<EB < ' < ' 2 B =,6' AB'
< B ' U,0' ?,F;> B=' H@' ;AB' =B , R,' UA 2B' ?, @ D' 1,00B ,80'
= 0F,;?AB0' ' :' , =' ;AB' 2,;;B ' U,0' ,FF BAB =B=' ' 7'
1,0?, B A,0' = B=' H@' ;AB' D, <;;B6' * ,' <0; ,' U,0' 0A<;6' ' ;AB'
<;AB 0:' 0< B' BEB ' B;> B=' ;<' +< ;>D,2:' ;AB' <;AB 0' UB B' F, =< B='
,;' E, <>0' =,;B0' HB;UBB ' P' , ='
* > D' ;AB' 0 BDB' < ' 2 B =,:' ;AB' $; 0A' ,8 @' A,=' HBB ' AB2='
' ,' F<0 ; < ' 0< BUA,;' 2B00' ,=E, ?B=' , =' < B' ?< ?B ; ,;B='
;A, ' ;A,;' UA ?A' ;' A,=' <??>F B=' ' C>2@6' & B22 D;< ' A,=
H <>DA;' H,? ' A 0' AB,=' M>, ;B 0' < ' 2EB ?,' ;<' B2< ?<:' UAB B'
AB' A,=' ;AB' % DA;' * E 0 < ' > =B ' A 0' A, =6' ' BU' 2B0' HBA =:'
< ' ;AB' A DA <,=' > D' =<U ' ;AB' 0<>;A' H, ' < ';AB' 1 < =BD<:

T' & B22 D;< ' ;<' 1,00B ,:' BF;6' O6' !' .<; B' B6\?B22B ?B' 08B0;' B D,DBB'
M>B' 2B0' < ? B 0' B;' 2B0' 0<2=,;0 =B' 2, 2 ?B' B;<> B , B ;' ?ABR' B>W6'
,2D B'
?B;' B D,DB B ;' E<>0' B ' ,EBR' B;B >' 4' < ? B 0' B;' ' 0<2=,;B' =B' ?A,M>B'
BD B ;' F<> ' B ' , B' > ' ?< F0' =B' F < B 06' %,' ?,F ;>2,; < ' =8 2 B =,'
B0;' =< B' >22B:' B;' NB' 0> 0' B ' = < ;' =8B ' , B' ?B' M>B' NB' E<>= , 06'
1, 0' NB'
F> 0' E<>0' ,00> B ' M>8 2' 8@' ,' F,0' > ' 0B>2' 0<2=,;' =B' 2,' 2 ?B' M> ' B;, ;' B '
2 B =,' ,>' 0B E ?B68
' "< ' =B;, 20' < ' ,22' ;A 0:' ??>= D' ;AB' ?> <>0' ;B 0' < ' ;AB' +< ;>D>B0B'
0B ;B ?B' < ' A DA' ; B,0< :' 0BB' < , <' =,' %>R:' 6' 5:' , =' 4 5 6'
AB' ,;B F;0' ;<' BW?>2F,;B' $, B <0' 0BB ' ,=BM>,;B6' * ,' <0; ,' U,0' 0A<;:'
<;' < ' ; B,0< :' H>;' < ' ?<U, = ?B' , =' >; @6

U,0' ;AB' 0;' * E 0 < :' ,;' . 22,' < ;B06' + ?;< ' , =' ;AB' =' * E 0 < ' A,=' HBB ' = ,U ' H,? ' < ' + AB2' ;<' , ,F ?A ,:' H>;' <2B' , =' ;AB' O;A' B , B=' ' ,;' (>, =,6' AB' +< ;>D>B0B' H D,=B0' < ' <2B , ' , =' 6' , FHB22' UB B' ,;' + A,> <0:' ;A,;' < ' +,? ' ,;' CBD>,6' AB' UA<2B' < ' ;AB' ?,E,2 @' A,=' ?< B' >F' < ' ;AB' B, ' ;<' N< ' ;AB' H D,=B' ;A,;' A,=' B?B ;2@' <FB ,;B=' > =B ' ,> > =80' < =B 06' AB@' <U' 2,@' ' ,' ;A ? ' 2 B' < ' 0 W' BD Y B ;0' < ' ' < ;' < ' (>, =,:' ;A <>DA' 2EB ?,' , =' " B W,=,0' ;<' %, BD,2:' A>0' ;AB' UA<2B' , @' U,0' ?< ?B ; ,;B=' < ' ,' 0A< ;' < ;' < ' ;BB ' 2B0:' ?<EB D' ;AB' U,;B 0AB=' HB;UBB ' ;AB' <,' , =' ;AB' 1 < =BD<:' , =' ;AB' H > ?,; < ' < ' ;AB' <,=0' UA ?A' 0;, ;' < ' B2< ?<:' =<U ' ;AB' ;U<' H, 0' < ' ;AB' 2,0; , B=' EB 6' AB' " B ?A' AB2=' H,? :' ??<0B' ;<' 2 B =,:' U ;A' ,' 0; < D' ,=E, ?B' D>, =' ,;' + AB2:' , =' <??,0 < ,22@' , =B=' ;AB' 2<U' ?<> ; @';<U, =0' ;AB' * <> <:' ' ;AB' = B?; < ' < ' . 22, <E,' =B' "<0H<,' , =' ,0;BZ' <= D<6' H<>;' >D>0;' 5' & B22 D;< ' <EB=' < U, =' ,' =,@80' , ?A:' ;AB' < ;' < ' A 0' , ; @' ?<2> 0' HB D' F>0AB=' >F' ;<' 2EB ?,' , =' " B W,=,0:' < ' ,' ,20B' > <> ' ;A,;' 1 ,00B ,' @,0' 2B,E D' ;AB' P;A' < F0' > 0>FF< ;B=' ,;' 2 B =,:' , =' A,=' = ,U ' H,? ' C> <;' ;<' ;AB' F2, 0' < ' %B< 6' ';A 0' A,=' HBB ' ;AB' ?,0B:' & B22 D;< ' ;B =B=' ;<' , B' ,' F>0A' ;<' B2 BEB' ;AB' HB0 BDB=' < ; B006' $>;' AB' 0<< ' = 0?<EB B=' ;A,;' ;AB' BF< ;' U,0' H,0B2B00:' , =' ;A,;' ;AB' ;A' < F0' U,0' 0; 22' < ' ;AB' R,E,' , =' ;AB' D>B=,:' UAB B < B' AB' A,2;B=:' , =' U,0' 0; 22' 2@ D' ;UB2EB' 2B0' ' < ;' < ' B2< ?<' UAB ' ;AB' < 0B' < ' ;A ' BWF2<0 < ' , ;' 2 B =,:' , =' ;AB' ?B00,; < ' < ' B' < ' ;AB' BW;' =,@:' HB; ,@B=' ;AB' ,?;' ;A,;' ;AB' F2,?B' A,=' ,22B :' , =' ;A,;' ;AB B' E,0' <' 2< DB ' , @' B,0< ' < ' , Y ;, D' ,' < U, =' F<0 ; < 6' ' ;AB' DA;' < ' ;AB' ;A:' ;AB B < B:' ;AB' UA<2B' , @' U,0' = , E ' H,? ' < ?B' < B' ;<' ;AB' 0; < D' 2 B' HB;UBB ' (>, =,' , =' B2< ?<:' , =' , , DB B ;0' UB B' ,=B' < ' ,' > ;AB ' B; B,;:' ' ?,0B' ;AB' " B ?A' 0A<>2=' <22< E' >F' ;AB' ?,F;> B' < ' 2 B =,'H@' , ' 0;, ;' , =' DB B ,2' ,=E, ?B6' 1 ,00B ,' 0BB B=' ,;' 0;' 2 B2@' ;<' , B' ;A 0' <EB6 < ' BF;B HB ' ' ,' H D,=B' < ' , ; @' , =' : ' A< 0B' = <EB' ' ;AB' $; 0A' ?,E,2 @' <>;F<0;0' ;<' 1 , ,2' =B' A,<' < 2@' EB' 2B0' ' < ;' < ' B2< ?<6' %<< D' >F< ' ;A 0' ,0' ;AB' ?< B ?B B ;' < ' ;AB' 0B <>0' E,0 < ' < ' +< ;>D,2:' & B22 D;< ' 0B ;' H,? ' A 0' , ; @';<' . 22,' < ;B0:' + A, <0:' , =' 1 < ;,:' , '=<U ' ;AB' A DA <,=' < ' ;AB' 0<>;A' < ' ;AB' 1 < =BD<:' , =' H,=B' <2B' = ,U' ' ;AB' O;A' * E 0 < ' <

(# " % 1 # * A '

;AB > 2 B2@ < BO ,O UB22 ,O ;AB 2 B2@6 O , ?< <22 , @ ;< 228O , ?A: ;A , ; < %B ;A A, = ,20< ;< HB , , DB=7 AB >0;U , ; , ; A< , ; 22 ; U,O ?B ; , ; ;A , ; ;AB = < FO A, = <EB=: H>; ;AB < B ; ;A , ; ?B ; , ;@ U,O <H; , B=: >0; , ?A < +< ;B =B 1 > ?B22 , : , = N< ; ;AB , , @: ; ;AB " B ?A A, = D< B < ;A: H>; 0>FF< ; 22 < ; ;AB (,0;B22< $, ?< <, = ; ;AB@ A, = ; , B ; ;AB <;AB : , = 2BOO F <H, H2B: ?<> 0B6

) #) % 1 # *) * # $ * (# " #

 0 ,22 ? ?>2, ; ;<U < 2 B = , A,O BEB B?<EB B= < ;AB = 0,0;B < 6 AB F<F>2, ; = <BO <; 22 >F ;AB , B, U ;A ;2 B U,220O <FB 0F,?BO , B BM>B ; : , = 0< B < ;AB < B F< ; , ; H> 2= D0 V B0FB? ,22@ ;AB <2= F,2,?B < ;AB D<EB < V 0; , = > 06 ;AB O 0A<U 0<2 = 0BEB ;BB ;A < B DA;BB ;A ?B ;> @ ,0< @ < ;2 B D <> = 2<< : , = 2 O@ <=B BF, O ,H<EB: UAB B ;2 B >FFB 0;< BO UB B H2<U , U, @ H@ ;AB BWF2<0 < 6 AB ?, ;AB= ,2 A,O BEB HBB F <FB 2@ BH> 2; , = O , B B ,D B ;6 AB , 2U, @ F,00BO ;UB2EB 2BO 0<>;A < 2 B = , 0< ;A, ; ;AB F2, ?B A,O H, = <?A, ?B < B?<EB @: , = B , O , 0; , ;B < =B?, @6 AB U,220 0; , = N>0; ,O ;AB@ UB B 2B ; , ;B & B22 D;< 8O A,0;@ BF, O 6 AB E,0; H< H F << 0AB2;B O BFB, ;B=2@ B ; < B= , , ; EBO < ;AB 0 BDB , B 0; 22 E 0 H2B: = , F H>; ; , ?;6 AB 0> <> =Y D ?<> ; @ 0 =B O , 2<U: <22 D: ; BB2BOO >F2, = V ;AB B=DB < ; ;AB E,0; F2, O < %B< 6 ; ?< ; ,0;O EB @ 0; < D2@ U ;A ;AB A 22@ , = F ?;> B0M>B 0?B B @ ;A, ; O B, ?AB= UAB < ?B ;AB <, A,O HBB F, 00B=6

" < 2 B = , ;AB D <> = 02<FBO =<U 0A, F2@ ; <;AB F2, ?B < , > > =8O ?B2BH , ;B= 0 0A6 AB ;<U O <; E 0 H2B , ;B ;AB 0; 2B < ;AB =B0?B ; ;<U, =O ;AB =BBF 0> D< DB ;A <>DA UA ?A ;AB <, ?>;O ;O U,@6 AB A DA <, = O EB @ H, = < , ; 22B @: HB D 0;BBF: 22B= U ;A D B, ; 0;< B0: , = , @ F2, ?BO 0A>; H@ A DA H, 0: UA ?A ;<UB , H<EB ; , = , B ; , <U6 AB 0A, F ;> , ; ;AB B =: UAB B ; =B0?B = ; ;< ;AB EB U ;A , 0>==B ; U 0; >0; A, EB HBB 0FB? ,22@ ; B0< B ;< , < ?B U ;A ?, E, 2 @ , = D> 0: ?< FB22B= ;< , A, 0;@ B; B, ;6 22 ;AB 02<FBO , H<>; ;AB <, = , B ?>; >F ;< 0 ,22 B2=O H@ A DA U,220 < > = B00B= 0; < B: U ;A<>; <8; , : 0>?A ,O , B 0BB < 5 <;0U<2=6 2 B H =DB O <; E 0 H2B ; 22 ;AB ; ,EB22B , FF <, ?A D < 2 B =, A,O D<; =<U ; ;< ;AB 2BEB2 < ;AB EB 6 ; O ?< F2B;B2@ ,0 B= H@ ;AB A DA ??, = <22 =B0? HB= ;AB ;BW; 0< 2< D ,O AB O =B0?B = D ;2 B 02<FB , H<EB6 " < ;AB F< ; UAB B ;AB <, = 0UB EBO ,0 =B: ; <, E< = ;A O <22: ;AB B O , <>DA D<, ; ; ,? =<U ; ;< ;AB 0; 22 E 0 H2B H =DB: H>; ;A O O <; ,E, 2, H2B < D> 0: A< 0B0: % . , ; @: < 2@ < B 0? , H2 D = E =>, 22@6

S + (+ !' "' #'

S B' ;U< , ?AB=' H =DB' 0' 0BEB ;@' @, =0' 2< D7' ;' ? <00B0' ;AB' <,' = ,D< ,22@:' U ;A' ,' ?> <>0' ;U 0;' ' ;AB' ==2B:' UAB B' ;AB B' 0' ,' 2 ;;2B' < > B ;' B?< = D' ;2 B' BF, ,; < ' < ' ;AB' 0; >?;> B' H@' C<A ' . 2:' ' ;AB' =,@0' , ;B ' ;AB' U, ' U,0' <EB 6 2 B B' 0' <' B ; < ' < ' ,> > =80' DA;' ' ;AB' 0? F; < V< 2@' ,' 2,>=,; < ' < ' ;AB' 9 D6 2 B' H =DB' ? <00B0' ;AB' EB ' ,;' ,' 0< ;' < 'D< DB V;AB' F2,?B' UAB B' ;2 B' <? 0' < ' ;AB' ;U<' 0 =B0' ?< B' B, B0;6 B ?B' ;AB' 0; B, ' > 0' > =B ' ;' EB @' B ?B2@:' HB D' ?< 0; ?;B=' ;<' , ' 2B00' ;A, ' ;0' < ,2' H B,=;A6 'F 0; B, ' ;AB' ?A, B2' H <,=B 0' , =' ;AB' F,00,DB' 2<< 0' >?A' 2B00' < =,H2B:' H>;' < ' 0< B' = 0;, ?B' < ' B,?A' 0 =B' < ' ;AB' H =DB' ;AB' EB ' 0' EB @' ,F =:' =, ; D' HB;UBB ' <? 0' , =' H<>2=B 06 2 B' 2 ;;2B' ?< B ' UAB B' ;AB' BU' " B ?A' UA<' F,00B=' ;AB' H =DB' <> =' ,' 0 ,22' , D2B' < ' =B,= D <> =' ?, ' HB' B,0 2@' =B ; B=6 ;' U,0' N>0;' ;<' ;AB ' DA;' , ;B ' ? <00 D6 22' ;AB' B0;' < ' ;AB' D <> =' < ' ;AB' UB0;' H, ' ?<>2=' HB' ;A< <>DA2@' 0B, ?AB=' H@' ;AB' $; 0A' D> 0:' UA ?A' UB B' F2,?B=' ,' BU' A> = B=' @, =0' >F' ;AB' <,=' < ' ;AB' 2B ;' A, =:' ,0' UB22' ,0' H@' ;AB' B' < ' ;AB' , ; @' B 0?< ?B=' , < D' <? 0' , =' H<>2=B ,' ,H<EB' ;AB' H =DB6

' ;AB' " B ?A' ,;;,? D' < ?B' => D' ;AB' B, 2@' F, ;' < ' ;AB' 0 0A:' ;A<0B' UA<' UB B' < ' ;AB '2B ;:' B, B0;' ;AB' EB ' , =' <FF<0 ;B' ;AB' =:' A,=' , ' B,0 B ' D <> =' ;<' ?<EB ' ;A, ' ;A<0B' < ' ;AB' DA;:' <FF<0 ;B' ;AB' O =6 ;' 0' <;' 0<' A DA' < ' <>DA:' , =' 2B00' ?>;' >F' H@' 0;< B' U,2206 B ?B' ;AB' 0; B00' < ' ;AB' =' <>DA;' ;<' A,EB' HBB ' ;AB' AB,E B V@B;' ;AB@' 2<0;' < 2@' ' B ' ;<' ;AB' 5' < ' ;AB' O =6 2 B' =, ,DB' ;<' ;AB' 2,;;B ' >0;' A,EB' HBB ' ?,>0B=' F, ;2@' UAB ' ;AB' ?,E,2 @' D<;' ' , < D' ;AB :' N>0;' ,0' ;AB' B; B,;' HBD, :' F, ;2@' UAB ' ;AB@' 0;< B=' ;AB' <22' ;<' ?<EB ' ;AB' B; B,;' < ' ;AB' =6

2 B' 0?B B' < ' ;AB' DA;' 0' <0;' F ?;> B0M>B' < ' ,' 0 ,22' 0?,2B V< B' < ' ;AB' F B;; B0;' ?< B 0' ' +< ;>D,2:' ,22' <? :' ; BB0:' , =' >0A D' U,;B 6V' X) <;B0' ,=B' < ' ;AB' 0F<;' < ' F 2' O:' 5 P6S

% & " ' O O

& ! $ & " ' " ' ' ' " @ ' & '
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' # ') * ' ' (# # ' ') ' ( ) : . %#) :) *
%)

' >?AB;' A, =' 0>??B00 >22@' F, ? B=' ;AB' F2, 0' < ' , D< '
=> D' ;AB' , >;> ' < ' 5:' , =' ;A<>DA' >DB B, >' ' ;AB' 2, 0;'
< ;A' < ' ;A, ;' @B, ' A, =' B?B EB=' ;AB' 0> B =B ' < ' ;AB' >?A '
B => D' D, 0< ' < ' (B < , :' ;AB' F<0 ; < ' < ' ;AB' " B ?A' '
) < ;A # , 0;B ' F, ' U, 0' 0; 22' , ' < ' 0, ; 0 , ?;< @6' ;' U, 0' <;'
@B;' F<00 H2B' < ' ;AB' =' , =' ;AB' 4;A' < F0' ;<' ?< H B' ;AB '
<FB , ; < 06' & 2B' ;AB' H <, =' 0; F' < ' ;B ;< @' ' & B0;B '
, ; , 2< ,' B, ?A D' < ' ;AB' <<;' < ' ;AB' +@ B BB0' ;<' ;AB' 0B, V'
UA<0B' F2, ?B0' < ' 0; B D;A' UB B' %B =, :' , , D< , :' , =' < ;<0, V'
0; 22' B , B=' ; , ?;:' >DB B, >' , =' >?AB;' ?<>2=' 0; 22' ?< Y
> ?, ;B' < 2@' H@' ;AB' ? ?> ;<>0' <>;B' ;A <>DA' " , ?B6' ,' 2B; ;B '
< ' , , D<00, ' ;<' $, ?B2< ,' ;<< ' ,' < ; DA;' < ' < B' ;<' , EB'
, ;' ;0' =B0; , ; < 6' ;' U, 0' A DA' ; B' ;A, ;' ;AB@' 0A<>2=' B =B, E<> '
;<' DB;' ;<' ;<>?A' U ;A' B, ?A' <;AB :' H@' ?>; ; D' ;A <>DA' ;AB'
F, 0A' 2 B' < ' =B B ?B6' $<;A' < ' ;AB' ?< F0 ?< , =B 0' A, =''
<U' , ' ?< F, , ; EB2@' BB' A, =:' , =' ?<>2=' , 00B H2B' , ' ?< 0 =B , H2B'
< ?B' < ' < B 0 EB' <FB , ; < 06' >?AB;80' F<0 ; < ' U, 0' ;AB' A, FF B 6'
AB' A, =' <' F, 0A' , @' <FF<0B=' ;<' A ' , ;' ;AB' < B ;6'
0' < 2@' <FF< B ;0' UB BV ;<' ;AB' & B0;' ;AB' H<2=' D>B 22B <'
1 ,' ;AB' ! <> DB ' < ' ;AB' H< =B 0' < ') , E, B7' ;<' ;AB' <>;A'
. 22, ?, F, ' U ;A' ;AB' = 2, F =, ;B=' B , 0' < ' A 0' H, =' < ' ;AB'
0 =B' < ' ;AB' B ,' =B' 2H, , ? ' , =' 1 <2 ,7' , =' ;<' ;AB' # , 0;'
;AB' D<EB < ' < ' %B =, :' UA<' BF;' ,' 2@ D' < ?B' > =B ' <2< B2'
+B B ,' < ' F<;' HB; UBB ' ;AB' ?, ' , =' ;AB' BD B:' < ' ;AB'
B ?<> , DB B ;' < ' ;AB' 0> DB ;0' < ' # , 0;B ' , D< 6') < B' <

P ' #) * ' (# # ') ?< E ?B= A 0B2 ;A , ; AB A , = HBB 0B ; < , <<28 B , = H@ <>2; , = 9 D C<0BFA6 "< ;AB BWFB= ; < A , = < 2@ HBB > =B ; , B < ;AB A@F<;AB0 0 ;A , ; ;AB B B @ U,0 =B < , 2 RB= , = B , =@ ; < 0> B =B V UA ?A U,0 ??B , 2@ <; ;AB ?, 0B6) < 0 BDB ; , A , = HBB H <>DA; , = U ;A<>; AB , E@ , ; 22B @ . , 2B ? , U,0 F BD , H2B6 AB B; B , ; < ;AB " B ?A U,0 A,0;B B= H@ ;AB , ?; ;A , ; ;AB ?< > ?, ; < 0 U ;A , D< A, = , 2 B , =@ HBB ?>; < 6 . 22 , ?, F , > = 0 , @B= H@ A 0 =B B , ; "BH >, @: A , = B;> B= ; <; AB < ; ;AB < B ; ;A , ; ;AB E , = D ?<2> 0 A , = F , 00B= < ; ; <; AB . , 2B ? , ?<, 0;6 B A , = H2<? , =B= ; AB D , 0< < B >B2: ?>; < ; U<; 0 , 22 ?<2> 0 UA ?A UB B <E D ; ;0 B DAH<> A<<=: , = ?, F;> B= <> D> 0 , = 0< B F 0< B 06 ; ;AB 0, B < B ; ;A<>DA >?AB; U,0 > , U , B < ;AB , ?; : <2< B2 +B B , : U ;A , =B; , ?AY B ; < %B = , : A , = , =B , =B < 0; , ; < , D , 0; 1 < R< : , = UAB ;AB D , 0< < # , 0;B , D< ?< ?B ; , ; B= ; <=B B = ; : A , = , 22B < " , D , , = H> ; ;AB H =DB ;AB B V ;AB < 2@ ? <00 D < ;AB ? , UA ?A U,0 " B ?A A , =06 1 , : ;<<: U , B= < ;AB =BF , ;> B < ;AB , H<=@ < ;AB = < F0 < ;AB <>; A: A , = B , 00B H2B= 0< B < A 0 2BE B0: , = HBD> ; <; B =B ;AB <, = < , D<00 , ; < + , FB2> , < ?B < B > 0, B6 >?AB; : ;AB B < B: < U ;A= , U D < . , 2B ? , : <> = F2B ;@ < <??>F , ; < , U , ; D A , D< 6 . 22 , ?, F , U,0 < ?B < B ?A , 0B= ; <; AB U 2=0 < ;AB B , =B 2H , ? G , = 0BEB , 2 ?<2> 0 UB B =B; , ?AB= F> 0> ; < 1 , 6 A 0 ; B ;AB @<> D F , ; 0 , U,0 > < ;> , ;B V AB U,0 ? , >DA; HB; UBB < B < >?AB; 80 =B; , ?A B ;0 , = , F , ;@ 0B ; <>; H@ ; AB D<EB < <) , E , B: , = ; , B F 0< B < 1 , ?A : U ;A 0< B 0?, B0 < A 0 <22<UB 06 0 F2 , ?B: A<UBEB : U,0 ; , B B B 2< D H@ A 0 > ??B #0F<R @ 1 , : UA< , 22 B= ;AB B , ; < ;AB D>B 22B <0 <) < ;A & B0; B , D< : , = ?< ; >B= ;AB 0; >DD2B U ;A , B B D@ , 0 D B , ; : , = , 0>??B00 , D B , ;B : ;A, ;A , ; < A 0 BFABU6

1 B , UA 2B: ;AB < ;A0 < "BH >, @ , = 1 , ?A A , = HBB U,0;B= 0< , ,0 ;AB = < F0 U,0 ?< ?B B= : , = ; U,0 <; ; 22 F 2 ;A , ; >?AB; U,0 , H2B ;< ; , B A , = ;AB B ;B F 0B UA ?A AB A 0B2 A , = , FF <EB= : , = ;< UA ?A ;AB # FB < A , = <U D EB A 0 ?< 0B ; V ;AB 0 BDB < %B = , 6 BU UBB 0 , ;B A 0 B;> ;< , , D<00 , AB B?B EB= < + , 0 ;U< FB , 2

2B;;B 0'=B <> ? D'A 0'2,;B'?, F, D ',0'F B0> F;><>0:'<HNB?;2B00:' , =',2;<DB;AB '=B0B E D'< 'A DA'?< =B ,;< 'A

\ 2B';AB'.,2B ?, 'BWFB= ;< 'A,='HBB ' 'F <D B00'1, 0A,2' >DB B,>'A,='HBB ';@ D'A 0'A, ='',;';AB' ,;,2,'F <H2B 0' UA ?A'.B = B', ='';6' @'A,='<> ='0<'F>RR2 D6' 0'2>?'A,='HBB'H,=V, ='A 0' ,>2;0'A,='HBB' , @V <'<',22';AB'?< , =B 0 ?A B'UA<0>??B00 EB2@'B =B,E<> B='';<'0>HN>D,;B';AB'> ;, B,H2B'F ? F,2;@'AB'U,0'=B? =B=2@';AB'2B,0;'?,F,H2B6' &AB'(B <,'B22:';AB', 'H<=@'<'A 0', @'U,0'2B;'2<<0B'<' <FB ,;<0' ';AB'<FB' B2=6' $>;'.B = B 80'=E 0<0:'<'UA<' ;AB'H> =B'<';AB'0 BDB'U<'A,=',22B :'UB B' '>?A';<<' = 2,F=,;B='','?< = ;<'<',?; EB'0B E ?B' %B,E D';AB';<' B?<EB';AB'0; B D;A', ='D,;AB'>F';AB'?< E,2B0?B ;0:' '?, ;< B ;0'HB;UBB'" D>B ,0', =' (B <,:' >DB B,>' <EB='0<>;AU, =0' 'C, >, @:',;';AB'AB,='<';AB'; <<FO'<' <>A, ', =' + <:'UA<0B';U<6'=E 0<0'0; 22'?<> ;B=' : 'H,@< B;0' U;A';AB'B,D2B0:';A<>DA';AB@'2B;'HBA ='';AB' : '0?' ';AB' A<0F;,20'<'" D>B ,0', ='+B F D ,6

AB'1, 0A,280' , '=>;@',;';A 0' < B;'U,0';<'?2B,';AB' <,=' <'" D>B ,0';<'$, ?B2< ,:'UA ?A';AB' F, 0A'<; B00' <'(B <,'A,='0<'B B?;>,22@'H2<? B='=> D';AB'UA<2B'@B,' 56' 22'>;AB',=E, ?B0'UB B'0>0FB =B='; 22';A 0'<FB ,;<'0A<>2='A,EB'HBB'?< F2B;B=:'H@';AB'# FB <80'0FB? ,2'<=B 06' *>AB0 B:' =BB=:'0<2,;B='$, ?B2< ,'U;A'0< B'P: 'B :'?< > Y ?,; D'U;A'" , ?B'<2@'H@'0B,:', ='0> <> =B='H@',='0Y ?<;B;B='F<F>2,;<:'UA ?A'U,0'B=>?B='';<'0B 0;, E,;<'H@' ;AB'H2<? ,=B' BF;'>F'H@';AB'$;0A'2BB;:'U,0' ',' FB 2<>0' ?<=;<6' AB B'A,='HBB' , @'UA<';A<>DA;';A,;' $2, B:' ?;<HB' 5:'A,=' ,?AB='D, 0;'$, ?B2<,' 0;B,='<' ;@ D';<';A <U'0>??<>0' ;<'(B <,:'AB'U<>2='A,EB'<?B='>DB B,>';<',H, =<';AB'0 BDB'<';AB'2,;;B'F2,?B6' "<' *>AB0 B'U<>2='A,EB'HBB' '0>?A'=, DB :'0 ?B'AB'U,0' B;AB'0; <D'B <>DA';<'DA;' ';AB'<FB' <';<' ,'B ?B ;2@';AB' B 0B'? ?>;'<';AB'U,220'<'$, ?B2<,:';A,;' >DB B,>' DA;

8' *,;B=' <' <FBD B'<' F 2'5', =' F 2' 6 BB' %() . % / /6 0', =' 556

T' 'C, >, @:'.B = B 80" B ?A', =' .B0;F2,2,' = E 0<0'?<>2=' <2@' 0A<U'P: ' B' '2 B', =' 4: ' 'A<0F;,26' '1>0;B' <22'<'C, 6 P' ;AB'@ # 2%('K ' :6

5 ' #) * ' (# # ') ' A G ' C#

, ?AB=' <>;' < ' C, >, @' P' U ;A' ;A BB' H, ; ; , 2 < 0' , =' ' ?> ,00 B 0' ' < =B ' ;<' BB;' ;AB' 1 , 0A, 26' B' U, ;B=' <> ' =, @0' , ;' (, <22B 0:' , =' ;AB ' 2B ;' ;AB' H D, =B' > =B ' ;AB' ?A, DB' < ' <2< B2' (>B; @:' , =' B;> B=' ' FB 0< ' ;<' $, ?B2< ,:' B?, 22B=' H@' > <> 0' < ' ,' ;A B, ;B B=' , ; ; , ? ' < ' ;AB' 0 =B' < ' , , D< , 6' ' ;AB' < D' , ;B ' A 0' =BF, ;> B' (>B; @80' < ?B:' UA ?A' HB2 BEB=' ;0B2 ' ' ?< F2B;B' 0B?> ;@:' U, 0' 0>==B 2@' 0> F 60B=' ' ;0' ?, F0' H@' ,' =B; , ?A B ;' 0B ;' <>;' H@' 8 * < B226' A, ;' B ;B F 0 D' < ?B ' A, =' AB, =' ;A, ;' >DB B, >' U, 0' 0; 22' ;UB ;@' 2B0' , U, @:' , =' ;A, ;' (>B; @' A, =' 0?, ; ;B B=' A 0' B ' ' ;AB' ;A BB' E 22, DB0' < ' , ; ,' +B FB;>, :' 1 <22B; :' , =' (, <22B 0:' ' < =B ' ;<' ?<EB ' ;AB ' < ' ;AB' H ; ;B ' C, >, @' UB, ;AB 6' ??< = D2@:' AB6' B0<2EB=' ;<' 0 ' , ' , ; ; , ? ' < ' ;A 0' > U, @' =B; , ?A B ;6' U<' H D, =B0 V , H<>;' O: ' B V > =B ' ;AB' 1 , M> 0' < ' , F<' . B =B:' , =B' ,' < ?B=' , ?A' , ? <00' ;AB' <> ; , 0:' , =' B22' >F< ' ;AB' E 22, DB0' , ;' =, U 6' AB' H, ; ; , 2 < ' < ' ;AB' ;A' ' , ; ,' +B FB;>,' U, 0' ?< F2B;B2@' ?>;' ;<' F B?B0' < ' ?, F;> B= V < 2@' ;U<' B ' , B' 0, =' ;<' A, EB' B0?, FB=6' AB' 4;A' , =' ;AB' ?> ,00 B 0' , ;' 1 <22B;' , B=' 0< BUA, ;' HB; ;B :' H>;' UB B' = EB ' H, ? ' ;<' $, ?B2< ,' U ;A' AB, E@' 2<00' + , ;' < ' ;AB' ;A =' H, ; ; , 2 < :' < B' < ' ;AB' ;A' ; , 2 , ' % B' BD B ;:' UA ?A' U, 0' F=0; B=' , ;' (, <22B 0:' B0?, FB=' =B0; >?; < ' H@' ;A <U D' ;0B2 ' ;<' ,' < ; B=' ?< EB ;:' , =' AB2=' <>;' < ' ;U<' =, @0:' ; 22' ;' U, 0' 0, EB=' H@' ;AB' , FF <, ?A' < ' >DB B, >' , 2< D' ;AB' A DA <, =6' 2; <DB; AB :' * >AB0 B8 ' = E 0 < ' U, 0' ;A B=' H@' ;AB' 2<00' < ' : ' B ' < ' C, >, @' ' 6 (> ; @' A, =' HBB ' ;, B ' F 0< B :' U ;A' 0< B' P ' B ' < B' , =' ;U<' D> 06' AB' F, , =0' = 0, FFB, B=' ;AB' < B ;' ;A, ;' >DB B, >' ?, B' ' 0 DA; :' , =' BN< B=' 8 * < B22' ' ;AB' A 2206

>DB B, >' B ;B B=' $, ?B2< ,' < ' ;AB' ;UB ;@ <> ;A:' , =' , ;' < ?B' , 00B ;B=' A 0' , >;A< ;@' H@' =BF<0 D' * >AB0 B' < ' ;AB' D<EB < 0A F' , =' 0B = D' A ' A< B' ;<' " , ?B6' AB@' UB B' <2=' B B B0:' , =' ;AB' DB B , 28' B =0' BD, =B=' A 0' = 0D , ?B' , 0' , ' = 0F2, @' < ' 0F ;B' < ' ;AB' F, ;' < ' A 0' 0>FB < ' $ >;' , 0' , 22' ;AB' F, 0A' , , ; EB0' =B0? HB' ;AB' B DA; BB < ;A0 8 = ?; , ;< 0A F' < ' * >AB0 B' , 0' A, E D' HBB ' , 0' >?A' = 0; D> 0AB=' < ' F E, ;B

' * >AB0 B:6< ' ;AB' B =' U ; D' > =B ' A 0' , B:' D EB0' A 0B2 ' <0;' A, =0< B' , =' > ?< E ? D' ;B0; < , 20' ' ;AB' , , ; EB' F ;B=' ' :' , 0' F, ;' < ' ;AB' # %(' (: ' 3 ' 8 : % % . T() 5 %' AB@' ?< ; , 0;' 0; , DB2@' U ;A' ;B?AB8 0' M><; , ; < 0' < ' $, ?B2< B0B' 2<?, 2' U ;B 06

5 ' ' # ') *' ' (# # '')' ' A3

0 =B:' H>;' <>A, ' = =' <;' 0BB' A 0' =, DB ' ; 22:' < ' ;AB' <22<U D' < D:' AB' <> =' 8*< B228Ø BD>2, ' ; <<F0' F<> D' =<U ' ;<' ;AB' F2, ' < ' . ?A' ' ;A BB' ?<2> 0:' , =' ?A, 22B D D' A ' ;<' ,' H, ;;2B' ' ;AB' <FB 6' ?B' ;AB' =, @' < ' . , 20' ;AB' , ;, 2, ' , @' A, =' BEB ' ; B=' 0>?A' ,' H<2=' 0; < B6

AB' " B ?A' DB B ,2' U,0' D B, ;2@' <>; > HB B=V AB' A, =' H>; O: ' , ; @' , =' : ' A< 0B' ;<' <FF<0B' ;<' 8*< B228Ø 4: ' BD>2, 0' , =' ;AB' : ' M>B2B;B06' AB' ,?; < ' B22' ;<' ;U<' 0BF, ,;B' F, ;0 V UA 2B' 22<E ,' , =' 1 2, 0' H ? B B=' U ;A' ;U<' H, ;;, 2 < 0' 2B ;' ;<' D>, =' ;AB' ;<U ' < ' . ?A:' <>A, ' <>DA;' ,' F ;?AB=' H, ;;2B' ,D, 0;' ;AB' F, 0A' , ' H<=@' U ;A' ;AB' B DA;' H, ;;, 2 < 0' , =' ;U<' , =' ,' A, 2 ' BD B ;0' < '?, E, 2 @' ' UA ?A' ?< Y 0; ;>;B=' ;AB' B , =B ' < ' A 0' < ?B6' ;' U,0' ,' B ?B' , =' UB22 ' ?< ;B0;B=' DA;G' 8*< B22' ;<< ' ;AB' < B 0 EB:' , =' A 0' B ' = 0F2, @B=' , ' > U< ;B=' E D<> ' , =' ; , ; EB6' ' A, FF 2@' < ' ;A 0' B ;B F 0 D' DB B ,2' A 0' 0 ,22' H<=@' < 'A< 0B B ' U,0' >;;B 2@' > ,H2B' ;<' B0; , ' < ' ;<' ?<FB' U ;A' ;AB' 0>FB < '' B ?A' ?, E, 2 @6' U ?B' ;AB' H, ;;2B' U,0' ;> B=' H@' ;AB' ?A, DB' < ' <>A, 80' 0M>, = < 0G' , ;B ' ;AB' 0;' BF>20B' 8*< B22' ,22 B=' A 0' HB, ;B ' DA;' U D:' ;A BU' ' ,22' A 0' B0B EB0:' , =' ; B=' ;<' <>; 2, ' ;AB' 0A< ;B ' '' B ?A' 2 B' < ' H<;A' 0 =B06' AB' B B @' U,0' 2<0 D' AB, E 2@' , =' 0A<U D' 0 D 0' < ' @ B2= D:' UAB ' ;AB' UA<2B' < ' A 0' ?, E, 2 @' ,=B' ,' 0B?< =' =B0FB ,;B' ?A, DB' < ' ;AB' F, 0A' DA;6' ;' U,0' ?< F2B;B2@' 0>??B00 >27' 8*< B228Ø ;> D' ?<2> :' ?< F<0B=' < ' ;AB' U 00' BD B ;0' < ' 9, @0B ' , =' ,W2B :' U,0' H < B :' , =' ;AB' 2, DB ' F, ;' < 6 ;' ?, F;> B=6' AB B>F< :' ;AB' F, 0A' DB B ,2:' UA<' A, =' = 0F2, @B=' > =, > ;B=' ?<> ,DB' ;A <>DAY <>;' ;AB' =, @:' , =6' AB, =B=' 0BEB ,2' ?A, DB0' ' FB 0< :' ;A<>DA;' ;' ; B' ;<' B; B6' B' B22' H, ?' < ' ;AB' <> ;, 0:' 2B, E D' HBA =' A ' ' 22B=' , =' U<> =B=:' , =' : ' F 0< B 06' AB' " B ?A

8' 0;' %?DB ' I;A BB' H, ;;06J:' O =' % D B' I;A BB' H, ;;06J:' 5 =' % D B' I< B' H, ;;6J:' , =' 4;A' % D B' I< B' H, ;;6J6' 1B, UA 2B' ;AB' <;AB 'H, ;;, 2 < ' < ';AB' 4;A' % D B' , =' ;A, ;' < ' ;AB' =' %BDB ' UB B' A<2= D' H, ? ' ;HB' M>B2B;B06' AB' ?, E, 2 @' UB B' ;AB' O;A' * , D<< 0:' =' + <E 0 < ,2' A, 00B> 0' I0<< ' , ;B U, =0' B?A 0;B B=' ;AB' 5;A' A, 00B> 0J:' , =' A, 2 ' ;AB' ;, 2 , ' !' * , D<< 0' < '), F<2B< 68

T' A 0' BD B ;' A, =' HBB ' < B=' < ' ;AB' !' ?, = B'8' < ' ;AB' <2=' U 00' BD B ;' < ' $B0?A, =:' H@' B, 0' < '=B0B ;B 0' < ' ;AB' (B , ' , =' ; , 2 , ' ; <<F0' < ' ;AB' " B ?A' @' < ' , ;, 2< ,:

A,= 0> B B= ,;2B,0;P ?,0>,2; B0 ??2>= D <>A, A 0B2 :
=B0FB ,;B2@U<> =B= ;AB AB,=: , =A,= HBB U;A ', ?B< =B0; >?; < H>; < ;AB 0>FB < ;@ ?,E,2 @: ;AB =,@ U,0 2<0;6

1, ?A : >DB B,> A,= ,;2,0;?<22B?;B= A 0 E,0;?< E<@ ,; (B <, V;AB B UB B < B ;A, ', ;A<>0, = U,DD< 0 2,=B U;A 2<> : HB0 =B0 F,? >2B0: ?, 00< 0: ?, ,DB0: , = <;AB EBA ?2B0< ,22 0< ;06 B , ?AB= FB 0< ;< B0?< ; ;: U;A ;AB ;,2, 0 V UA< UB B <U> =B BEB <2 : + < A,E D D< B A< B < 2B,EB: V, = ;AB BU2@ , EB= (B , = E 0 < < <>@B 6 .B = B U,0 2B ; HBA =V,0 C, >, @ ;< =B B = ;AB F> =, < ;AB ?> 0 < 0 < ;AB M>B2B;B0 < <E , , = 1 2, 06 1B, UA 2B: <>A, 80 = E 0 < : UA ?A A,= F,00B= ;< ;AB A, =0 < (B B ,2 >DB B,>: ;AB 1, 0A,28 0 H <;AB : 0 ?B ;0 <2= ?A B A,= HBB E,2 =B= ;< " , ?B: F> 0>B= ,2 B < , ?A F, ,22B2 ;< ;A,; < ;AB , < ?B6 1 <E D < . ?A H@ ;AB <2 =B >0F , , = 1, B0,: ; ?, B =<U ;< ;AB E,22B@ < ;AB %2<H BD,;: < ;AB 0, B =,@ ;A,; + <80 , = <>@B 80 ; <<F0 B,?AB= ; H@ ;AB <;AB <>;B6 AB 1, 0A,2 , = ;AB , ?<2> A,= ,=B ;AB U,@ F,0; <0;,2 ?A: UA ?A U,0 <> = 0; 22 > 0>H=>B=: , = 0; 22 H2<? ,=B= H@ 1,R R>?AB22 80 H D,=B: UA ?A A,= HBB 2B ; <FF<0 ;B ; <<F0 UB B < =B B= ;< N< ;AB = E 0 < : , WB= =B;,?AY B ; > =B <2< B2 *BE,>W HB D 2B ; ;AB 0;B,= ;< U,;?A ;AB ?,0;2B6 AB 1, 0A,2 ;AB ;<< >F A 0 B0 =B ?B ;AB F,2,?B ; ; $, ?B2< , : , = A,= A 0B2 F <?2, B= (<EB < < , ;,2< , U;A D B,; 0;,;B: ?< 0< , ?B U;A ;AB FB ,2 =B? BB < "BH >, @ : UA ?A A,= ;, B ;AB F ? F,2 ;@ <>;< ;AB A, =0 < 9 D C<0BFA: , = ,=B ;0 ,= 0; ,;< B0F< 0 H2B ;< +, 0 ,2< B: , = <; ;< 1, = =6

>DB B,> B0;,H2 0AB= A 0B2 FB , B ;2@ , ; $, ?B2< , : , = F <?BB=B= => D ;AB BW; ;U< < ;A0 ;< ,?; ,;AB ,0 , E ?B <@ ;A, ', 0 , ?< , =B 8 ?A B 6 AB ?< =>?; < 2 ;, @ <FB ,Y ; < 0 AB A, =B= <EB ; ;< A 0 H <;AB : ;< ;AB > H<> =B= = 0D>0; < ;AB <;AB DB B ,206 UA, ; F <F< ; < 0 ;AB B0F< 0 H 2 ;@

T 1, ; B 80 2 0;0 0A<U 5 < ?B 0 22B= , = U<> =B=: UA ?A: , ; ;AB '0>,2 , ;B: F B0>FF<0B0 ,H<>; P ' < 4 ' ?,0>,2; B06) ,F B : ?ABFB2B : , = ;B?AB ,22 ;A BB 0;,;B ;AB " B ?A 2<00 , ; : ' < : VBE =B ;2@ ;<< A DA6

< ' ;AB' = 0,0;B 0' UA ?A' <22<UB=' 0A<>2=' HB' = 0; H>;B=' HB;UBB ' ;AB' ;U<' >DB B,>0' ;' 0' A, =' ;<' 0,@6 $>;'),F<2B< :' EB @' ,;> ,22@' , =' B,0< ,H2@:' F2BUB=' ;' < ' ;AB' 1, 0A,280' 0A<>2=B 0:' , =' U <;B' ;A,;' T B' 8B0;' F< ;' B ' B0;, ;' =, 0' 2B0' ?,F ;,2B0' ; < D B0' =B' , BB' M>B' =B0' D ,>W B ' ?AB ' FB>EB ;' ,?M>B ' =B' 2,' D2< B' <>' B ;B ' < ' B0; B' AB' < ?B' ,00B H2B=' < ' ;AB' %2<H BD,;' U,0' <U' ,' EB @' 2, DB' < B:' ?< 0 0; D' < ' ;A BB' = E 0 < 0:' ;A<0B' < ' >DB B,>:' BEB <2 :' , =' <>@B 6' ;' > Y HB B=' B, 2@' : ' B :' < ' ,2< D' U ;A' ;AB' ?< E<@' ;AB B' A,=' , ?AB=',' ,00' < '= , ;0' < ' ;AB' <2=' BD B ;0' < ' ;AB' 4;A' < F0:' UA ?A' H <>DA;' ;AB ' H,;;,2 < 0' >F' ;<' >22' 0; B D;A

AB B' UB B' < 2@' ;U<' ,; < ,2' F2, 0' < ' ?, F, D ' <FB ' ;<' ;AB' " B ?A6 ;AB' < B' U,0' ;<' , ?A' < ' , ,D< ,' U ;A' ,' 0 BDB ; , :' , =' ;<' ?< F2B;B' ;AB' ?< M>B0;' < ' ,;,2< ,' H@' ;AB' ?,F;> B' < ' ;0' D B,;B0;' < ; B00B6 AB' <;AB ' U,0' ;<' ,0 ' , ,D< ,:' , =' ;<' 0; B' ,? <00' ;AB' F ? F,2 ;@' UB0;U, = ' ' < =B ' ;<' DB;' ;<' ?< > ?,;< ' U ;A' >?AB;' , =' ;AB' @' < ' ,D< :' H@' U,@' < ' D>,2,=,:' B EB ,:' , =' %B =,6 ' ;AB' ;U<' ?< F0' ?<>2=' BB;6)< ;AB ' ,;,2< ,' U<>2=' HB' ?< F2B;B2@' 0<2,;B=' < ' , ,Y D< ,:' < ;<0,:' , =' . ,2B ? ,6 ;' U,0' ;A 0' 2,;;B ' F2, ' UA ?A' >DB B,>' A,=' HBB ' < =B B=' ;<' ?, @' <>;' H@' A 0' ,0;B 6 B' U,0' = B?;B=' ;<' , ?A' < ' %B =,:' , =' ;<' N< ' >?AB;' HB < B' ;A,;' F2,?B6 $@' ,' = 0F,;?A' < ' "BH >, @' 5' AB' A,=' HBB ' < B=' ;A,;' < ' 1, ?A' ' ;AB' @' < ' ,D< ' U<>2=' A,EB' , EB=' HB < B' %B =,:' , =' U<>2=' HB' < D' ;0' 0 BDB' A 0' F <FAB?@' U,0' ,20B' 6 < ' >?AB;:' ,0' UB' A,EB' 0BB :' A,=' D< B' < ' H ' A 0' . ,2B ? , ' BWFB= ; < :' , =' U,0' ,;' B >B2' < ' ;AB' ,FF< ;B=' =,@6 ;' U,0' F<00 H2B' ;<' = B?;' < ' +, 0' ,' ?< H B=' <EB B ;' =BFB = D' < ' ,??> ,;B' ; D' < ' ;0' 0>??B00B6 $>;' >DB B,>' 0A<>2=' A,EB' ,;;B F;B=' ;<' ?, @' <>;' ;AB' < =B ' 0B ;' A ' H@' A 0' ,0;B ' U ;A' F <FB ' RB,2' , =' = 0F,;?A6 A 0' AB' , 2B=' ;<' =<6 A 0' <U ' ?2 ,;< ' U,0' ;<' 0; B' ,' H2<U' ,;' , ,D< ,:' , =' ;AB' <EB B ;0' < ' A 0' ?< F0' 0A<U' ;A,;' ;A 0' U,0' ;AB' <FB ,;< ' UA ?A' AB' A,=' =B;B B=' ;<' ?, @' <>;6 0;B,=' < ' , ?A D' ' FB 0<

8' %() . %' PO 6 " < ' < F BD B:' O' F 2:' 6

T BEB <2 80' = E 0 < ' ,2< B' > HB B=' :5 ' <<;' , =' 5 ' A< 0B' ,;' ;AB' < B ;6

T),F<2B< ' ;<' 2, B:' "BH6 5:' < ' +, 06 6 , <;AB ' = 0F,;?A' < ' "BH6 P:' <6 P 50' < ';AB' %() . %

S ' (# # ' 8 * #

U ;A A 0 , H<=@: < B EB , , = %B =, : AB = B?;B;2 A 0 H <;AB ;< ; , B A 0 <U , = BEB <2 80 = E 0 < 0 , = ;< <EB H@ . 22, , ?, < B>0: , 2, DB ;<U ; UB2EB 2B0 ;< ;AB < ;A UB0; < , ,D< , : , = 0> ; , H2B , 0 , H, 0B < <FB , ; < 0 , D, 0; ;A , ; ? ;@ I 1 , ?A 5J6 H, ; ; , 2 < , = , A , 2 U , 0 = <FFB= , ; . 22, Y , ?, : ;< BBF <FB ; AB ?< > ?, ; < 0 HB;UBB B>0 , = $, ?B2< , : UA 2B , H D, =B < <>@B 80 BU2@ , EB= (B , 0: > =B ; AB BEB > 2>? @ ?AU, ;R V ;AB E, M> 0AB= < $ >?A , = #0F, , D>B , V U, 0 F2, ?B= , 0 , 0< ; < 2, D>, = , ; 1, B0, 6 1, ?A 4 , 0> < 0 U, 0 0B ; ; ;< , , D< , =B , = D 0> B =B 6 A 0 U, 0: < ?<> 0B: B >0B= V ;AB ;<U U, 0 >22 < ; <<F0: < B @ 8 *< B22 A, = N>0; 0; B D;AB B= ;0 D, 0< H@ B; D ;< ; A 0B2 : U ;A ;AB P: B UA< BF B0B ;B= ;AB B , 0 < A 0 B2= , @6

AB F, 0A DB B , 2: ?< ;B F2, ; D ;AB F<0 ; < < , , 0 U ;A , U, @ B@B: A, = ?< E ?B= A 0B2 ;A, ; AB ?<>2= 0;<F (B B , 2 >DB B, >80 > ;AB <EB B ;0 H@ 0; D , ; A 0 2 B< ?< > ?, ; < U ;A $, ?B2< , 6 A 0 AB F <?BB=B= ; <= < ;AB <0; 0 2 >2 , = 0>??B00 >2 , 0A < 6 $B < B ;AB B B @ ?2<0B= >F< , , D< , : AB 0B ; <>; , F ? B= < ?B > =B (B B , 2 C>, , <: U ;A < =B 0 ;< , ; ; , ? . 22, , ?, , = 1, B0, U ;A<>; , < B ;80 =B2, @6 A 0 =, D 0; < B U, 0 ?< F2B;B2@ 0>??B00 >26 , < 0;< B= . 22, , ?, , ; = , U < 1, ?A : , = ;<< < ?, F;> B= ;AB UA<2B < ;AB B F<0;B= ;AB B6 B U, 0 U<> =B=: , = A, = ;< A, = <EB A 0 ?< , = ;< , F< . B =B: UA<: , ;B 0< B F B2 , @ 0 0A D 2, 0; D < ;A BB = , @0: ?< F2B;B= ;AB 2 ; ;2B ?, F, D H@ = E D ?AU, ;R <>; < 1, B0, : , ;B , AB, E@ DA; : < F 2 : UA ?A ;AB (B , H D, =B 2<0; < ?B 0 , = B AB 0< , ;B B0 ;> B= <>; ;< A> ; ;AB <>;B= < ?B , 0 ; B; B= < $, ?B2< , : , = 2 ?;B= , @ > ;AB 2<00B0: 0< ;A , ; ?AU, ;R < 2@ H <>DA; H, ? , ; A = < A 0 H D, =B ;< ;AB 1, 0A, 26

AB ;<>?A HB;UBB ;AB ;U< = E 0 < 0 , ; B>0 , = ;AB D, 0< < $, ?B2< , U, 0 ;A>0 ?< F2B;B2@ 0BEB B=6 1 < B<EB : >DB B, >

T BB E<26 6 FF6 5 6

^ AB % FFB $? BH> D < ?B $, ? A, >0B> 0, @0 2 0 = , @ ;A, ; < 2@ < ?B 0 , = P B UB B 2<0;6 $>; 1, ; B 80 2 0; 0 0A<U < ?B 0 < ; AB) , 00, >: =>?, 2 , W< : , = A, 2; % FFB BD B ;0 22B= < U<> =B= , ; < B, 1, B0, < ; AB = ;A < F 26

5P ' # ') * ' ' (# # ' ') ' ' X > <

B, B=' 2B0;' ;AB' BW;' <EB' < ' ;AB' , = D' < ?B' DA;' HB' , ' ,;;,? ' < ' ;AB' 0<2,;B=' < ?B' > =B ' <2< B2' *BE,>W' UA ?A' U,0' H2<? ,= D' <0;,2 ?A6 B' ;AB B < B' 0B ;' <>;' ,' H D' U;A' < B' < ' A 0' , =B0 =B ?, F' < ' H<, =:' HB, D' < =B 0' ;<' A 0' H <;AB ' , =' BEB <2 ' ;<' B;> ' ,;' < ?B' ;<' A 0' AB,=' M>, ;B 0' U ;A' ;AB ' ; <<F06' $@' D<<=' < ;> B' ;AB' B00B DB ' B,?AB=' A 0' =B0; ,;< ' U ;A<>;' HB D' ;B ?BF;B=' H@' # D2 0A' ? > 0B 0:' , =' ;AB' ;U<' = E 0 < 0' 0;, ;B=' < ' ;AB ' , ?A' H,? ' ;<' $, ?B2< ,' < ' F 2' 46' 2@' ;U<' =,@0' HB < B:' BEB <2 :' < B' H@' 2>? ' ;A, ' H@' 0 22:' A,=' D<;' < ' ,' < B ;' ;<' ;<>?A' U ;A' ;AB' @' < ' ,D< 6' ' BWF2< D' ?<2> ' < ' ;U<' H,;;,2 < 0' > =B ' <2< B2' . 22,;;B:' UA ?A' AB' A,=' 0B ;' <>;' UB0;U, =' ;<' ",2?B;:' ' ;AB' = B?; < ' < ' ;AB' #H <:' B;VB ; B2@' H@' ?A, ?BV,' 0 2, ' =B;,?A B ;' < ' 1>0 B 80' = E 0 < ' < ' ;AB' =' < F0:' UA ?A' A,=' ,=E, ?B=' ;<' 1< ,6' ' ;B ?A, D D' BU0' < ' ;AB ' B0FB?; EB' , B0:' . 22,;;B' 2B, ;' < ' A 0' ?<22B,D>B' ;A,;' >?AB;' U,0' ,;' ;A 0' < B ;' , ?A D' < ' %B =,:' UAB B:' ,??< = D' ;<' ;AB' # FB < 80' 0; >?; < 0' ;<' 1, 0A,2' >DB B,>:' AB' <>DA;' ;<' A,EB' , EB=' < B' ;A, ' ,' < ;A' HB < B6' . 22,;;B' H <>DA;' H,? ' ;AB' < ,Y ; < ' ;<' BEB <2 :' H>;' ;AB' 2,;;B ' ?<>2=' , B' <' >0B' < ' ;' UA 2B' AB' U,0' > =B ' < =B 0' ;<' B;> ' U ;A<>;' =B2,@' ;<' $, ?B2< ,' B' , =' (B B ,2' >DB B,>' ,??< F2 0AB=' ;AB ' B; B,;' ' ;A BB' 6=,@0:' >?A' A, ,00B=' < ' ;AB' U,@:' <;' < 2@' H@' ;AB' 0< ,;B B0' < ' ;AB' <> ;, 0' H>;' ,20<' H@' 8*< B22:' UA<' <22<UB=' ;AB ' U ;A' ,' =B;,?A B ;' < ' ;AB' D, 0< ' < ' , ,D< ,6' AB@' ;<< ' 0< B' 0 ,22' BEB DB' < ' A :' A<UBEB :',;' . 22, , ?,:' UAB B' ;AB@';> B=' < ' ;AB' F> 0>B 0' , =' 2?;B=' ,' 0A, F' ?AB? ' < ' ;AB ' ,=E, ?B=' D>, =:' UA ?A' U,0' F B00 D' :' U ;A' < B' ?<> ,DB' ;A, ' = 0? B; < :' < ' ,' < ?B' UA ?A' <>; > HB B=' ;' H@' <> ' ;<' < B6' ' F 2' 5' ;AB' UA<2B' , @' U,0' B ?, FB=' <>;0 =B' ;AB' U,220' < ' $, ?B2< ,6' <> ; D' ;AB' D, 0< :' >DB B,>' A,=' <U' < B' ;A, ' : ' B ' ' A, =:' H>;:' <;' ?< ;B ;B=' U ;A' ;A 0' ?< ?B ; ,;< :' AB' 0B ;' < =B 0' H,? ' ;<' ;AB' F> =, :' < =B D' . B = B ' ;<' H D' < U, =' ,0' , @' ; <<F0' ,0' F<00 H2B' ;<' (B < ,:' , =' < ' ;AB ?B' ;<' F>0A' < U, =' =<U ' ;AB' A DA <,=' ,0' , ' ,0' (, <22B 0:' 0<' ,0' ;<' 0>??<> ' *BE,>W:' ' ;AB' F, , =0' 0A<>2=' 0A<U' , @' ;B ;< ' < ' B2 BE D' <0;,2 ?A6

AB' 1, 0A,280' BW;' <EB' 2<0;' A ' ;AB' ,E<> ' < '),F<2B< :' ' "< ' =B;, 20' < ' . 22,;;B80' BWFB= ;< ' 0BB' .,?, :' E6 O 6

, =' 2B=' ;<' A 0' B <E,2' ' = 0D ,?B' ;<' +, 06' ' F 2' ' AB' 00>B=' < =B 0' ;<' BEB <2 ' ;<' , ?A' < ' <0; ,2 ?A:' , =' ;AB B' ;<' ; , B' <EB ' ;AB' ?< =>?;' < ' ;AB' 0 BDB' < ' * BE, >W:' UA 2B' , ;' ;AB' 0, B' ; B' AB' A 0B2 ' <EB=' H,? ' ;<' (B < ,' U ;A' A 0' H <;AB 8' " B ?A' = E 0 < :' , =' , ' B 0B' ; , :' ?< 0 0; D' F, ;2@' < ' ;AB' B F;@' ?, ;0' < ' ;AB' ?< E<@' UA ?A' AB' A,=' H <>DA;' 0<>;A' ' 1, ?A:' F, ;2@' < ' ?< 0?,;B=' F <FB ;@' < ' ,22' 0< ;0' < ' $, ?B ' ' < ,' >DB B,>80' BW?>0B' < ' ;A 0' B; <D ,=B' <EB B ;:' U2 ?A' ,H, =< B=' ,22' B ; ,2' ,;,2< ,' ;<' ;AB' B B @:' U,0' ;A,;' A 0' , @' U<>2=' A,EB' BWA,>0;B=' ;AB' ,D,R B0' < ' $, ?B2< ,' ' AB' A,=' BF;' ;' ?< ?B ; ,;B=' < ' ;B ' =,@0' < B:' , =' ;A,;' AB' A,=' <' <;AB ' U,@' < ' BB= D' ;:' 0 ?B' ;AB' ,?; E ;@' < ' ;AB' 0< ,;B B0' ,=B' ;AB' = 0F,;?A' < ' < ,D D' =B;,?A B ;0' >;;B 2@' F<00 H2B6' AB' < ,2' B B?;' < ' ;AB' <EB' U,0' =BF2< ,H2B7' , ;B ' ;, D' ' A, =' , ' < B 0 EB' <EB B ;' ,D, 0;' , ,D< ,:' AB' A,=' ,22<UB=' A 0B2 ' ;<' HB' ?AB? B=' H@' , ' B B @' A<FB2B002@' B < ' ' > HB 0:' A,=' 2<0;' <EB ' : ' B ' ' FB;;@' ?< H,;0:' , =' ;AB ' A,=' B; B=' ;<' ;AB' H,0B' < ' UA ?A' AB' A,=' 0;, ;B=' ' C, >, @6' A BB' < ;A0' A,=' HBB ' U,0;B=:' , =' <;A D' A,=' HBB ' D, B=' 0,EB' ;A,;' ;AB' 0 ,22' ?,0;2B' < ' <0;,2 ?A' U,0' <U' ' ,' =B0FB ,;B' ?< = ; < ' < ' U, ;' < ' <<=:' , =' >0;' ,22' ' <;' 0FBB= 2@' 0>??<> B=6' & A,;' B =B B=' ;AB' F<0 ; < ' < ' >DB B,>' ;AB' < B' 0A, B >2' U,0' ;A,;' AB' A,=' <U' ' < ;' < ' A ' < 2@' ,'0 B2B;< 'B B @6' "< ' 8 *< B22' ,;' ;A 0' < B ;' U,0' = 0; ,?;B=' H@' ;AB' ,=E, ?B' < ' >?AB;' ,D, 0;' %B =,:' , =' A,=' HBB ' < ?B=' ;<' = ,U' < ' ;<U, =0' ;AB' H< =B 0' < ' ,D< ' ;U<' < ' ;AB' <> ' = E 0 < 0' ;<' UA ?A' CB' A,=' B< D, RB=' A 0' 2 ;;2B' B2=' , @6' ",? D' >DB B,>' ;AB B' U,0' < 2@' , F<' .B =B80' = E 0 < ' < ' BD>2, 0V <;' <EB ' : ' 0; < DV , =' ;AB' H, =0' < ' ;AB' <> Y ;, 06' ;' U,0' ,D, 0;' 0>?A' , ' B B @' ;A,;' ;AB' 1, 0A,2' A,=' ?< ?B ; ,;B=' : ' B V ?2>= D' .B = B 80' < ?B V HB;UBB ' <0;,A8 ?A' , =' (B < ,6

AB' <<= F <H2B :' < ' & A ?A' ;A<0B' UA<' =B B =' >DB B,>' 2,@' ,22' ;AB' 0; B00' F<00 H2B' U,0' <' =<>H;' ,' EB @' B,2' < B6

' ??< = D';<' F, 0A' ,??<> ;0' ;A 0' ?2>=B=' >?A' 22 D<;;B ' F <FB ;@' HB2< D D' ;<' ;AB' 1, 0A,2' A 0B2 :' , =' <;AB ' 0>FB <' < ?B 06' "B B ' I0BB' ;B?2 B:' E 6' J' =B?2, B0' ;A,;' >DB B,>' ?, B=' <2" ,22' ;AB' > ;> B' < ';AB' <@,2' +,2,?B6

T' "< ',' =B B ?B' < ';AB' 1, 0A,2' < ' ;AB0B' 2 B0:' 0BB' H ' %(' %" A:E%(' E<26' / /6' FF6' 6

5 ' #) * ' (# # ') A3 4 !C

AB BB= D< $, ?B2< ,: U ;A ;O D, 0< , = ;O 2, DB ? E 2 F<F>2,; < : H@ B, O < ? E<@O H <>DA; < " , ?B: _U,O < B,O@ ;,0 6 $>; ; 0BB O ??2B, ;A,; U ;A ;AB 2, DB < ?B ,; A O = 0F<0 ; < V ;AB 4;A < FO U,O <EB : 0; < D V >DB B,> ?<>2= A,EB < D, RB= ?< E<@ D>, =O 0> ? B ;2@ F<UB >2 ;< =B @ ;AB F, , =0: U ;A<>; ,H, =< D ;AB < B Y 0 EB F<0 ; < < ; < $, ?B2< ,: UA ?A U,O ,22 F< ;, ; ;< A 6 B DA; A,EB 0B; ,0 =B : B < ;A,; F; F<0B: , = 0; ' A,EB BF; ,0; < D B2= , @ ;<DB;AB 6 , = AB =< B 0<: 8 * < B22 ?<>2= <; A,EB =, B= ;< , ?A U ;A : B : ;AB F ? < ;AB , ;,2, , @: ;< B2 BEB %B =,: UA 2B A O <2= B B BO UB B ,00B=: ,U, ; D, F<00 H2B ,;,? : ,A> = B= 2BO ,U,@6

1 B, UA 2B: ;AB < B ;,0 UA ?A U,O ?< F2B;B= H@ ;AB 4;A < FO => D ;AB < ;AO < F 2 , = 1 ,@ U,O ;AB B=>?; < < <0;,2 ?A6 AB 2 ;;2B ?,0;2B U,O , F2,?B < 0; B D;A: FB ?AB= A DA ,H<EB ;AB ,H, =< B= ;<U ;< UA ?A ; HB2< DB=6 ; U,O D, 0< B= H@ ;U< H,;,2 < 0: < B < (, ,=, BD>2, O < B= D8O <2= E 0 < : ;AB <;AB < 2<?,2 ,;,2, 2BE BO > =B <2< B2 C>2 , < #0; ,=,: , < ?B < A DA 0F ; , = ?< Y B =,H2B <H0; ,?@6 < ;AB 0; 0> < O ,=B ;< A C, >, @ H@ >DB B,>: AB A,= BF2 B= ;A,; K <0;,2 ?A U,O ;AB ?A 2= < (B < ,: , = U<>2= <U A<U ;< B >2,;B ;AB ?< =>?;; < ;AB <;AB ? ;@68) < U,O ;A O A DA 2<U BF D , HB2 B= H@ ;AB , ;B ?< =>?;; < ;AB D, 0< 6 <0;,2 ?A AB2= <>; < C, >, @ P ;< 1 ,@ U ;A<>; B?B E D B ;AB ,; ?< E<@ < U ;A<>; < , @ B < ?B B ;06 U ?B ;AB 2<?,2 M>B2B;BO ,;;B F;B= ;< F,00 0>??<> O ;< ;AB ?,0;2B: H>; < B,?A <??,0 < ;AB@ UB B = EB < : , ;B A,E D H, B2@ 0>??BB=B= ?< > ?,; D U ;A #0; ,=,6 AB ?< E<@O BEB D<; ??<0B B <>DA ;< B ;B ;AB D,;B06 ; 2,0; < 1 ,@ : ;AB F <Y E 0 < O < ;AB F2,?B UB B ?< F2B;B2@ BWA,>0;B= G ;AB B>F< #0; ,=,; << A, = ,0?AB B UA ?A U,O < 2@ ; B= H@ < B <;AB D<EB < => D ;AB UA<2B +B 0>2, & , T ;AB " B ?AY , $ B B , ; 2 B =, 1 ,@ 6 B F>; BEB @ ,H2B H<= B= , < ;AB D, 0< > =B , O , ; = DA; 00>B=

H<>; P: , 22: H>; : UB B A<0F ; ,2 < =B; ,?AB=6
^ B H,;,2 < < 2 HB , I< 0; < (, ,=, J , = < B ;B ? < < 2BE BO < ;AB F <E ?B < (B < , G ;<;,2 0; B D;A ,H<>; : H,@< B;O6

0 2B ;2@' < ' ;AB' ?,0;2B:' , =' ?A, DB=' ,;' ;AB' HB0 BDB 0B' 2 B0:' U ;A' ;AB' ;B ; < ' < ' ?>;; D' A 0' U,@' ;A <>DA' ;<' , F< .B =B80' AB,=' M>, ;B 0' ' ;AB' <> ;, 06' B' U,0' < ;> ,;B' B <>DA' ;<' F B ?B' ;AB' ;,2 , ' <>;F<0;0' ,;' ;AB' 0;' >0A6' $>;' ;U<' UA<2B' H D,=B0' UB B' F B0B ;2@' ,;' A 0' ABB20:' A 0' D> =B0' 2<0;' ;AB ' U,@' , < D' ?2 0' , =' ,E B0:' , =' AB' U,0' <EB ;, B 6' > D' H,? ' U ;A' A 0' B, D>, =' ;<' B =' < ' ;AB' F> 0>B 0:' AB' U,0' U<> =B=' , =' ;, B ' F 0< B 6' B ' <;AB ' < ?B 0' , =' 0< B' ' 0<2= B 0' 0A, B=' A 0' , ;B6' ;AB' B0;' < ' ;AB' D, 0< ' = 0FB 0B=' ' ;AB' A 220:' , =' B,?AB=' . ?A' ' 0 ,22' F, ; B0' ;<' ;AB' > HB ' < ' ' B 6' ' < 2@' ;AB ' D,22, ;' ?< , =B ' A,=' B0?,FB=' U ;A' ;AB :' ;AB' BWF2< ;' U<>2=' A,EB' HBB ' , ' BW,?;' F, ,22B2' ;<' ;AB' 2 B =,' 0< ; B' < ' 6

AB' B=>?; < ' < ' <0;,2 ?A' , =' < ' ,' 0 ,22' < ;' < ' ;AB' 02B0' < ' %,0' 1B=,0' B, ' ;AB' <>;A' < ' ;AB' B :' UB B' ;AB' 2,0;' ,?A BEB B ;0' < ' ;AB' @' < ' ,;,2< ,' UA 2B' ;' U,0' > =B ' ;AB' ?< , =' < ' >DB B,>6' ' F 2' O0' ;AB' # FB < ' A,=' B0<2EB=' ;<' B <EB' A ' < ' A 0' F<0;:' , =' A,=' < =B B=' 1, 0A,2' 1,?Y =< ,2=:' * > B' < ' , B ;> :' ;<' B2 BEB' A 6' ' ;AB' '%: ' ;' U,0' B B2@' 0;,;B=' ;A,;' ;AB' B2=B ' 1, 0A,2' A,=' HBB ' < ?B=' H@' 22 AB,2;A' ;<' B0 D ' A 0' ?A, DB6' $>;' ;AB' B,2' ?,>0B0' < ' A 0' = 0F2,?B B ;' , B' F2, 2@' 0;,;B=' '),F<2B< 80' 2B;;B ' ;<' ;AB' 1 0;B ' < ' & , 6' AB@' UB B' ;AB' H2<U' UA ?A' AB' A,=' D EB ' ;<' ;AB' FB ,2' F B0; DB' H@' A 0' B; B,;' ;<' (B < ,:' , =' A 0' = 0 ' <HB= B ?B6 ' A,E D' , 2B=' ;<' , ?A' < ' %B =,' ' , =' < ' >?AB;6' ;' >0;' HB' ?< B00B=' ;A,;' ;AB' U ,;A' < ' ;AB' # FB < ' U,0' N>0; Y ,H2@' <>0B=6' ;0' ,2' , B0;,; < ' ;<< ' ;AB' 0A,FB' < ' ,' >;B' = B?; D' ;A,;' UAB ' ;AB' '%: ' F>H2 0AB=' ;AB' BU0' < ' ;AB' 0>??B00B0' ,;' <0;,2 ?A' , =' %,0' 1B=,0:' ;AB' , B' < ' >DB B,>' U,0' ;<' HB' BF;' <>;' < ' ;AB' F, ,D ,FA:' , =' < 2@' ;A<0B' < ' A 0' 0>H< = ,;B0' B ; < B=

& A 2B' ;AB' BU' ?< , =B ' < ' ;AB' 4;A' < F0' U,0' < ' A 0' U,@' < ' ;,2@' ;<' +B F D , :' , =' < ' 0< B' ; B' , ;B ' A 0' , E,2' < ' 1,@' :' ;AB B' U,0' ,' ?< F2B;B' 0>0FB 0 < ' < ' ,?; EB' <FB ,; < 06') < B' < ' ;AB' " B ?A' DB B ,20' ' ;AB' F ? F,2 ;@' ?<>2=' =<' < B' ;A, ' ,U, ;' < =B 0:' , =' BBF' ;AB' B DAH<> A<<=' < ' A 0' ?, ;< Y B ;0' 0, B' < ' ;AB' BF B00 H2B' M>B2B;B06' AB' UA<2B' ;B B0; ' BB' %() . %' PO :'),F<2B< ' ;<' 2, B:' < ' F 2' O:' , =' P :' 0, B' ;<' 0, B' < ' 1,@' 6

F, ' U,0' F2,?B=' ,;' ;AB' E 22,DB' < ' , ' > <:' <FF<0 ;B' ;AB' < ;AY UB0;B ' , D2B' < ' ;AB' ;<U :' < ' UA ?A' ;' 0' = 0;, ;' ,H<>;' : ' @, =06 ;' U,0' BE =B ;' < ' ;AB' 0;' ;A,;' ;A 0' U<>2=' HB' ;AB' F< ;' < ' ,;;,? ' 0B2B?;B=' H@' ;AB' " B ?A' B D BB 06

AB' , @' A,=' H, B2@';, B ' >F' ;0' F<0 ; < ' UAB :' < ' F 2' 5:' > <> 0' UB B' 0F B,=' ,H <,=' ;A,;' 8 * < B22' U,0' < ' A 0' U,@';<' B2 BEB' %B =,6 AB@' >0;' A,EB' HBB ' F> B' D>B00B0:' < ' ;AB' F, 0A' DB B ,2' < ' ;A,;' =,@' U,0' 0; 22' ,;' , ,D< ,' , =' A,=' ,=B' <' <EB B ;6 AB@' UB B:' A<UBEB :' 0> ? B ;2@' FB 0 0;B ;' ;<' =>?B' >?AB;';<';, B' < ' 1>0 B 80'?<EB D'?< F0:0; B D;AB B=' H@';A BB' <;AB ' H,;;,2 < 0:' < ' ,' 00 < ' < 'BWF2< ,;< :' ,2 <0;' ,0' , ',0' , BD,:' < ' ;AB' $, ?B2< ,' <,=6) <' F, 0A' < ?B' U,0' B;:' < ' ?<>2=' , @' < ,;< ' HB' BW; ,?;B=' < ' ;AB' A,H Y ;, ;06 AB' ,H0B ?B' < ' ;AB' ; <<F0' < ' ;AB' 2B ;' H, ' < ';AB' BD B' U,0' 0<< ' =B;B?;B=' H@' (, ? ,' < =B:' UA< V ;<' A 0' D B,;' BD B;' ;A BB' =,@0' 2,;B V 0B ;' B00B DB 0' ;<' < ' 8 * < B22' ;A,;' ;AB' " B ?A' 2 B0' ;<' ;AB' B,0;' < ' ;AB' ? ;@' UB B' <U' ,2 <0;' > <??>F B=6

AB' B @' 8 * < B22' U,0' ,2 B,=@' < ' A 0' U,@' UAB ' ;A 0' BU0' B,?AB=' A 6 AB' < B ;' ;A,;' AB' U,0' 0> B' ;A,;' >DB B,>' A,=' 2B ;' $, ?B2< ,' , =' G (' B; B,; D' < ;AU, =:' AB' A,=' B0<2EB=' ;<' 2@' ;<' ;AB' B2 B ' < ' %B =,' U ;A' ;AB' ;U<' = E 0 < 0' < ' UA ?A' AB' ?<>2=' = 0F<0B6 ' ;AB' ;UB ; B;A' AB' , ?AB=' < ' , ,D< ,' H@' . , 20' , =' 1 < H2, ?A:' U ;A' 4: ' BD>2, ' , ; @:' O ' A< 0B:' ,' 0 D2B' H,;;B @:' , =' 0< B' : ' M>B2B;B0O6 ' ;AB' ;UB ;@' ;A =' AB' A,=' B,?AB=' C> B=,:' ;UB2EB' 2B0' < ' %B =,:' U ;A<>;' A,E D' 0BB ' ,' " B ?A' F ? B;' < ' A,E D' HBB ' =B;B?;B=' A 0B2 6 B' ;B =B=' ;<' = EB' < ' ;AB' BU' H,;;,2 < 0' H2<? D' ;AB' H =DB ' AB,=:' , =' ;<' <FB ' >F' ?< > ?,;< ' U ;A' ;AB' HB0 BDB=' ; E ' ;A,;' 0, B' =,@6 ' < ;> ,;B2@' < ' A :' >?AB;' , =' 1>0 B ' A,=' B;> B=' < ' ;AB' F BE <>0' DA;' < ' ;AB ' BWFB= ; < ' ;<' , BD,:' , =' UB B' <U' 2@ D' ,;' 2?<2B;DB:';A BB' 2B0' < ;A' < ' ;AB' H =DB AB,=:' UA ?A' U,0' <U' ' ?A, DB' < ' , 0FB:' >?AB;80'?A B < ;AB 0;, 6 <' ;AB' 0> F 0B' < ' ;AB' F, , =0:' UA<' A,=' BWFB?;B=' ;<' 0BB' ;AB0B' ;A BB' H,;;,2 < 0' , =' ;U<' 0M>,= < 0' < ' A>00, 0' B; B' ' A,0;B:' ;AB' " B ?A' 0A<UB=

?< H,;, ;:' " B ?A:' F, 0A:' < ' # D2 0A:' => D' ;AB' UA<2B' +B 0>2, ' & , 6' & AB ' A 0' ; <<F0' A,=' B ;B B=' ;AB' 0; BB;0:' AB' = B?;B=' ?<2> 0';<U, =0'B,?A'D,;B:', ='A,E D'0B?> B=' F<00B00 < ' < ';AB ',22:' 0<' ,0';<' , B'B0?,FB' ;<';AB'<FB '?<> ; @' F<00 H2B:' H,=B' A 0' ; <<F0' F>0A' ;AB' UA<2B' < ?< H,;, ;' F<F>2,;< ' < ' %B =,' >F A '' ;<' ;AB' ? ;,=B2:' UAB B' ;AB' HB,;B ' D, 0< ' UB 0' ,2 B,=@';, D' B >DB6' K' AB' 0<2= B @:8' ,0'AB' U ;B0:' U ;A'BE =B ;' ?< F2,?B ?@', =' F =B' 'A 0' DB > ;@:' K' UB B' 0B;' ' ,' ?< ?B ; ?' <EB B ;' ;<' F>0A' ;AB' A,H;, ;0:' ,2< D' U ;A' ;AB' D, 0< :' ;<U, =0' ;AB'>FFB ' 0; BB;0', =';AB' ? ;,=B26' AB@' UB B' = 02<=DB=' H@' >0 B; @' B' < ' 0; BB;' , ;B ' 0; BB;:' A<>0B' , ;B ' A<>0B:' ' < =B ';<' < ?B';AB ' ;<';AB' ?,0;2B6' A,;' U< ' U,0' 0; 22' D:' , =' ;0' = 0?A, DB0',>D B ;B=';AB' =, DB ', ='AB' F, ?' < ';AB' ? E 2' F<F>2,;< :',0';AB@' UB B' ;A >0;:',2< D' U ;A' ;AB' U B? ' < ';AB' D, 0< :' ;<';AB' = ;?A' , =' <EB ';AB' = ,UH =DB6' + B00B=' < ' H@' <> ' 0<2= B 0:' ;AB@' A,0; 2@' F<> B=' ;<' ;AB' ?,0;2B' @, =:' HB < B' ;AB' (<EB < ' A,=' ; B';<' < =B ' ;A,;' ;AB@' 0A<>2=' <;' HB' ,22<UB=' ;<' B ;B 68' AB' ?,0;2B' HB D' ? , B=' U ;A' 0< B' ;BB ' ;A<>0, =' B :' U< B :', =' ?A 2= B :' >?AB;' D,EB' < =B 0' ;<' H< H, =';' U ;A' BEB @',E, 2,H2B' < ;, ', =' A<U ;RB 6' K' #EB @' 0AB22:8' AB' U ;B0:' K';A,;' B22' ;<';AB' , <U' 0F,?B'?< ;, D';A 0' >2; ;>=B:' B22' < ' 0B B=' ,00B0' < ' < ?< H,;, ;0' <' 2B00';A, ' < ' 0<2= B @6' ;' A,=' HBB ' ?,2?>2,;B=';A,;';AB' (<EB < ', ='AB' <0;' =B;B B=' < ?B 0' U<>2=' HB' 2>B ?B=' H@';AB' F B0B ?B' < ' ;AB0B' U< B :' ?A 2= B :' <2=' <2 :', =' > , B=' FB, 0, ;06' 0' (B B ,2' >?AB;' A,=' 2,;;B B=' A 0B2 ' U<>2=' HB' ;AB' ?,0B:' ;AB' 0?AB B' A,=',F < F;', ='B? 0 EB' B B?;68' ';AB' OJ;A',;' =Y =,@:' (, ?,' < =B:' > ,H2B' ;<' 0;, =';AB' 02,>DA;B ', @' 2< DB :' A< 0;B=';AB' UA ;B' 2,D6

;' 0' = ?>2;' ;<' 0BB' A<U' ;AB' < ? D' < ';A<>0, =0' < ' < ' ?< H,;, ;0:' H@' B, 0' < ' >0 B; @' B:' < ';<';AB' < ;' < ';AB' B B @80' 2 B' < '=B B ?B:' = B 0' ', @' U,@' < ';AB' =BE ?B:' <;' > <U ', < D' ?, '0,E,DB0',='B=' =, 0' '< ',;;,? D' > =B '?<EB '< '?,F;> B=' U< B ', ='?A 2= B ';A >0;' '>F< ';AB' UB,F< 0' < ';AB ' ,;AB 0' , ='A>0H, =06' AB' ,?;' F2,?B0';A,;' F<2 0AB=' U ;B ', ='H2B',= 0; ,;< '%<> 0 (,H B2' >?AB;' < ' ;AB' < ,2' 2BEB2' < ',' D' < ' * ,A< B@6' B',? <U2B=DB0';A,;' ;AB' F2,' U,0' =B2 HB ,;B2@' ;A<>DA;' <>;:', =';A,;' 0?< B0' < ' A 0 ' B' < ';U<?,0B0?,',20<'HB'M><;B=' < ';AB' #> <FB,' 1 ==2B' DB06

' DB2 , = 2<;G ;0 , ; ;,0 U,0 ;< A, ,00 ;AB " B ?A D, 0< < ;AB F> =, :, =;<;A B,;B 1,?=< ,2=80 B, BEB @; B;A,;2 B <EB=< U, =;<U, =0$, ?B2< ,6 0B?< =
= E 0 < 2,@ ,? D ;A,;? ;@:< ;AB 2<UB %2<H BD,;: U ;A =B;,?A B ;0 ,; 1< ;0B ,; , = 1, B0,: UA ?A BF;>F ;AB
?< > ?,;< 0 U ;A , F<.B =B , =;AB)< ;A6 U< < B
= E 0 < 02,@ UB0;U, =: ;AB= B?; < < " ,2?B;, =$< N,$2, ?,:
U,;?A D >?AB;:, =F BF, B=;<<FF<0B, @0B <>0 ,;;B F;< <
A 0 F, ;;<??2<0B >F< < ;<0,6 AB ;A = E 0 < :< B0B EB:
< B=,?B ; ,2 ,00 < ; <<F0: B,=@;<B < ?B B ;AB ;AB
=B;,?A B ;0 UA ?A U,;?AB= >?AB;< ;A<0B UA ?A U,;?AB=
1,?=< ,2=7 ;2,@0<>;A< , ,D< ,:,;;AB <2=B 2H,6 A>0
F<0;B=8*< B22 U, ;B=< > ;AB =BEB2<F B ;0:, =?< ; >B=
;<= 22, =BWB ? 0B A 0 BU 2BE B0:;<= 0 00 ,?; EB, = ?< Y
FB;B ;< ?B 0:;<?<22B?;, D,R B0:, =;<M>, B2 U ;A ;AB
2<?,2 C> ;,6 "< ;A 0 ,?; EB, = ;B22 DB ;: B? 2B00 , =
A DA A, =B=:@<> D< ?B E,0 < BEB U< 0B ;B 0 U ;A ;AB
,;,2, ,>;A< ; B0 ;A, A 0 F B=B?B00< :$2, B6 AB ,
?,>0B < M>, B2 U,0 ;A,; 8*< B22 U 0AB=;<0; B D;AB A 0
BD>2, ; <<F0:H@= , ; D ;<;AB=BF2B;B= . %(< B= D80
, = <>F D @80 <2= H,;;,2 < 0 BEB @ B? > ;;A,;AB ?<>2=?,;?A6
B AB2=;A,;;AB " B ?A ?<>2= < 2@ HB H <>DA;;<,2
?AB? H@= 0? F2 B=; <<F06 AB C> ;,:< ;AB <;AB A, =:
HB2 BEB= D>B 22, U, , B:, = F B B B=;<?,22 <>;< <
; B ;<; B ;AB M>B2B;B0 , =0< ,;B B0:UA< = ;B= H,?
;<;AB A< B0 UAB BEB ,? 0 0 U,0 <EB 6 $<;A 0 =B0 A,=
>?A ;<0,@ < ;AB 0B2EB0 ;AB ,;,2, 0 ?<>2= F< ;<>;
;A,;;AB BD>2, ; <<F0 A,= HBB HB,;B ; B0 <>;< > HB :
UA 2B ;AB <U BD>2, 0 A,= ,?A BEB= , @ 0 ,22 0>??B00B0:
, = =< B ;AB " B ?A >?A A, 6 8*< B22:< ;AB <;AB
A, =: U,0 M> ;B DA;< A<2= D ;A,;D>B 22,<FB ,;< 0:
>?A ,0 ;AB@ DA;? <= B ;AB B B @: U<>2= BEB =B,2
A ,;,;,2 H2<U< 0A ;AB U, 6 B = B, B=< ? B? > ;Y
D A 0 , @ >F ;<,< ?B < : B ,;0< B A,FF@
>;> B =,;B:, = < =B2 EB D ,0;< B U ;A 0>FB < > HB 0
UA ?A 0A<>2= =B0; <@ ;AB " B ?A A<2= < ,;,2< ,6 1B, Y
UA 2B: >?A ,0 ;AB@ M>, B22B=: ;AB 0A F, 0A DB B ,2
, = ;AB 2<?,2 C> ;,UB B H<;A ;<< D<<= A,;B 0 < " , ?B ;<
,22<U ;AB = 0F>;B0 ;< F BEB ;, E D< <>0 B0 0;, ?B <

, ' #) * ' (#22# ') ' XC 6E

HB D BF;' >F' ;AB' F ? F,2 ;@6 8 * < B22' ?, B=' A 0' F< ;' ;<' ;AB' BW;B ;' < FB 0>,= D' ;AB' C> ;,' ;<' ,22<U' A ' ;<' < ' , @' < ' ;AB' BEB ?A, D D' ;B ? <0' < ' M>B2B;B0' ;<' K' 2BD < 0:8 UA ?A' UB B' ;<' HB' BF;' FB , B ;2@' B H<= B=' , =' ;<' ?<> ;' ,0' F, ;' < ' ;AB' BD>2, ' , @6 B ?B' ?, B' ;AB' 2, DB' 0B' ' A 0' >0;B <22O6

' <' F2B,0B' ;AB' ,;,2, 0:' UA<' A,;B=' ;AB' =B,' < ' 2< D' 0B E ?B:' ;AB' B 2 0; B ;' ' ;AB' %BD < 0' U,0' ,=B' < ' ;U<' @B, 0' < 2@:' , =' ;AB' B ' UB B' ;<' HB' B ; ;2B=' ;<' ;BB ' =,@O8' 2B,EB' => D' B,?A' A,2 @B, ' < '0B E ?B6

% & " ' O O N' % ! $ '

& ! $ & " ' "' ' & ' &+' ! "' @ $ " I' '
! $ " I' "@ $' &+' = =

% " ' 0 ;>, ; < ' UA ?A' A, =' HBB ' ? B, ;B=' H@' 9 D' C<0BFA80 , F =' ?< M>B0;' < ';AB' <FB ' ?<> ; @' < ' =, 2>0 ,' ' C, >, @', =' "BHY >, @' :', =' H@' A 0 , 2> B' ;<' ?, F;> B' , = R:' U, 0' =B0; B=' ;<' B , ' > ?A, DB=' ', @' < ';0' < B' F< ; , ;' =B; , 20' < ',' >22' @B, 6 <>2;:' U ;A' ;AB' ;A BB' ?< F0' < ' . ?;< :' BH, 0; , :', =' 1 < ; B :' U, 0' 0; < D' B <>DA' ;<' A<2=' ;AB' ;<U 0' , =' F2, 0:' 0; < D' B <>DA' , 20<' ;<' H2<? , =B' , = R' , =' ;<' 0F, B' BWFB= ; < , @' < ?B0' , ;' ;B E, 20' < ' <FB , ; < 0' <>;0 =B' ;AB' 2 ;0' < ' A 0' <U ' 0FAB B' < ' ?< , =6' " < ' ; B' ;<' ; B' AB' 0B ;' ;AB' D B, ;B ' F, ;' < ' 1 < ; B 80 ?< F0' , D, 0;' #0; B , => , :' , =' ;AB' D B, ;B ' F, ;' < ' BH, 0; , 80 ?< F0' , D, 0;' 1 > ? , 6 $>;' A 0' 4 : ' B ' UB B' <;' 0> ? B ;' ;<' F <E =B' , ' , @' < ' ;AB' FB , B ;' ?< M>B0;' < ' B ;2 B ' < ';AB0B' F <E ?B06 =' BEB @' ; B' ;A, ;' : ' < ' : ' 0, H B0' , =' H, @< B;0' UB B' = 0; , ?;B=' ;<' < B' < ';AB0B' , =0:' ;AB' ;<; , 2' < ' ; <<F0' 2B ;' HBA =' ;<' U, ;?A' , = R:' ;<' D>, =' BE 22B:' , =' ;<' BF B00' ;AB' ;B , H2B' , ?; E ;@' < ';AB' D>B 22B <0' < ';AB' <> ; , 0' U, 0' <> =' ;<' HB' =, DB <>02@' 0 , 226 # B' 2< D' ;AB' < ?B' ;A, ;' A, =' , ?AB=' <>;' < ' BW;B , 2' <FB , ; < 0' A, =' ;<' HB' ?, 22B=' H, ? ' A, 0;B:' ;<' U, =' < '0< B' FB 2' ;<' < B' < '<;AB '< ';AB' E ; , 2' F< ;0' < ' =, 2>0 , 6

<>2;' A 0B2 ' B , B=' < ';AB' D B, ;B ' F, ;' < ' A 0' ; B' , ;' BE 22B:' <??>F B=' <;' < 2@' ' BBF D' ;AB' <EB B ;0' < 'A 0' ;A BB' ?< F0' ' > 0< V <' B, 0@' ; , 0 :' < ' H<;A' . ?;< ' , =' BH, 0; , ' A, =' U 220' < ';AB ' <U :' , =' BEB ' ;AB' F2, ? =' 1 < ; B ' <??, 0 < , 22@' > > B= V H>;' ' 0>FB ;B = D' ;AB' =B; , 20' < '? E 2' , = 0; , Y ; < 6 ;' U, 0' EB @' 0B2=< ' ;A, ;' AB' , ?AB=' <>;' ' FB 0< ' , ;' ;AB' AB, =' < 'A 0' 2, 0;' B0B EB0:' ;<' 0; B D;AB ' 0< B' UB, ' F< ;' ' A 0' 2 B' < '< B ?B' < ' =B B ?B6 * > D' ;AB' BW;' ;U<' @B, 0' AB' U, 0' M> ;B' , 0' >?A' ;AB' . ?B <@' , 0' ;AB' < , =B A B ' ' =, Y 2>0 , 6 A<>DA' ;AB' # FB < ' A, =' B , B=' < ' , D' ;A, ;

D>B 22B <0:' UAB ' ;AB' 2, ;;B ' , ;;B F;B=' , =0' =, DB <>02@' ??<0B' ;<' ;AB' D B, ;' ? ; B06' "< ' ;AB' ?: % ' . ' U,0' UB22' , U, B' ;A, ;' ';AB' , ; < ,2' ?, >0B' UB B' , ;' 2, 0;' ;<' ; > FA' , ' BE 2' , ;B' U<>2=' , U, ;' A 6' , E D' < ?B' ?< ;;B=' A 0B2 ';<' ;AB' " B ?A' 0 =B:' AB' U,0' < ?B=' ;<' =B B =' A 0' < E ' B? ' < ' ;AB' D, 22<U06

<>2;80' ? E 2' D<EB B ;' U,0' ?< =>?;B=' U ;A' ,' , ' D B, ;B ' =B?B ?@' ;A, ' ;A, ;' < ' *>AB0 B:' 9B22B , :' , =' <;AB ' <;B=' F2> =B B 0', < D' ;AB' " B ?A' D<EB < 06' $>;' ;' E<2EB=:' BEB Y ;AB2B00:' ,' ?< 0 =B , H2B' , <> ;' < ' < B' < ' 2B00' <FB ' 0F<2 , ; < 6' AB' 1 , 0A, 280' <U ' A, =0' UB B' <;' M> ;B' ?2B, G A 0' ?<22B?; < '< ' ;AB' U< 0' < ' 1 > 22<' , =' . B2, 0M>BR:' ;AB' F =B' < ' +, 0' ' , ;B ' @B, 0:' BF B0B ;B=' H2, ? , 2' < ' =, 2>0 , ' ?A> ?A ?< F< , ; < 0:' UAB ' ;' = =' <;' ?< B' < ' > = 0D> 0B=' ?< 0?, ; < 6' ' 2B00' AB' U,0' >?A' ,2 D B=' H@' A 0' <U ' ?< F, ; <;0:' <' 2B00' ;A, ' H@' ;AB' F, , =0:' A, =' ?, 0A' ,0' UB22' ,0' F ?;> B0' = =' <;' ?< B', 00' ;<' A ' $>;' A 0' BW, ?; < 0' UB B' <=B , ;B' ?< F, B=' U ;A' ;A<0B' < ' 0< B' < ' A 0' 0>H< = , ;B06' ;A<>DA' 1 < ; B ' , =' *B00<22B0' A, =' D<<=' BF>; , ; < 0' BH, 0; , ' A, =' , ' , <>0' < B:' , =' +B 8B@ ' < =:' (<= <;' IUA<' 0A<;' A 0B2 ' B, 2@' ' UAB ' ?, 22B=' ;<' , ?B' ,' ?< 00 < ' < ' M> @J:' , =' ?B ; , ' <;AB ' DB B , 20' A, EB' EB @' H2, ? ' , 0' , D, 0;' ;AB 6' ; 22' ;AB' , ?A B' < ' D<EB B ;' U< B=:' ' <;' U ;A<>;' ?; < :' , ;' 2B, 0;' U ;A' , ' B ? B ?@' ;A, ;' ?< ; , 0; B=' , E<> , H2@' U ;A' ;AB' , = 0; , ; < ' < ' , @' <;AB ' F <E ?B' < ' F, ' 0, EB' >?AB; 80' =< , ' < ' , D< 6

$>;' ;' U,0' < 2@' ;AB' E, 22B@' < ' ;AB' (>, =, 2M> E ' UA ?A' 2, @' 0>H=>B=' HB B, ;A' ;AB' BB;' < ' <>2;6' , = R' , =' ;AB' <> ;, 0' A, =' @B;' ;<' HB' =B, 2;' U ;A:' , =:' ,0' ;AB' < ;A0' UB ;' < :' ;AB' = ?>2; B0' < ';AB' " B ?A' @' < ' =, 2>0 , ' HB?, B' < B', =' < B' BE =B ;6' ;' U,0' < 2@' H@' =BD BB0' ;A, ;' ;AB' " B ?A' DB B , 20' ?, B' ;<' ?< Y F BAB =' ;AB', H0<2>;B' F BD , H 2 ;@' < ' , = R:' , =' ;AB', =E, ;, DB' ;A, ;' ;AB' F<00B00 < ' < ' ;AB' 02, = ? ;@' , =' ;AB' 2BB;' =BFB = D' < ' ;' D, EB' ;<' ;AB' F, , =06' ';AB' 0;' < ;A0' < ';AB' 0 BDB' . ?;< 80

T 6' H0B E, ; < 0' H@' A 0' , =B =B ?, F' ;6' A, , 0:' ' A 0' % (' FF6' P:' ,0' ;<' ;AB' 1 , 0A, 280' , = 0; , ; < 6' ;' ,@' 0B EB' ,0' , ' BW, F2B' < ' ;AB' 2 HB ,2' U, @' ' UA ?A' ;AB' 0>FB < '< ?B 0' UB B' , 22<UB=' ;<' = , U' ' < B@:' ;A, ;' <>2;' D, EB' A 0' BW , =B =B ?, F' :P ' , ?0' ,' < ;A:' UAB ' AB' U,0' ?< , = D' ' ;AB' ;<U ' < ' , < , ' HB0 =B0' A 0' F, @' , =' BB' <<=' , =' M>, ;B 06' ;' 0' 0 , 22' U< =B ' ;A, ;' AB' , =' <;AB ' D<EB < 0' HBD, :' ,0' AB' 0, =:' , _; , ?AB ' =>' D , =' 0B D B> 68' 6' ;B?AB:' E 6' 5:' < ' F, 0A' E BU0' < ' <>2;80' , = 0; , ; < 6

. ?;< ' ;<< ' ;AB' B<??>F , ; < ' < ' ;AB' < ;' ,0' ,' ?A , 22B DB:' , =' ;A<>DA;' ;A , ;' ;AB' 22 B0' >0;' A , EB' D<<=' B , 0< 0' < ' , ; ; , ?A D' 0<' >?A' F< ; , ?B' ;<' ;6' ??< = D2@' AB' >2; F2 B=' A 0' H , ;Y ;B B0' < ' ;AB' <?, =B <:' ; 22' AB' A , =' D<;' < ;@' D> 0' <> ;B=' ' ,' =< , ; D' F<0 ; < :' U ;A' UA ?A' ;<' <EB UAB2 ' ;AB' D , 0< ' 6' ;AB ' A , 2 > <>0' 0; < DA<2=6' AB B' U , 0' ,' 2< D' , =' B ?B' , ; 22B @' ?< ;B0;:' H>;' ;AB' " B ?A' A , =' ;AB' , =E , ; , DB' H<;A' ' ;AB' > HB ' < ' D> 0' , =' ' ;AB' ?< ?B ; ?' B' UA ?A' ;AB@' ?<>2=' F<> ' >F< ' ;AB' < ;6' AB' , E , 2' AB2F' F < 0B=' ;<' 1 , ; , D< =, ' F <EB=' < ' 2 ; ;2B' , 00 0; , ?B:' F , ;2@' <U D' ;<' ;AB' F , ?; ?, H 2 ;@' < ' ;AB' >=' 2 , ;0' UAB ' ;AB' ; =B' U , 0' <>;:' F , ;2@' HB?, >0B' ;AB' D> H<, ;0' ?<>2=' <;' B => B' ;AB' B' < ' ;AB' " B ?A' AB , E@' , ; 22B @6' ' F 2' ' (B B , 2' (, A , :' UA<' A , =' , EB=' , ;' , = R' , =' ; , B ' ?< , =' < ' ;AB' $; 0A' < ?B0' <EB ' ;AB' AB , =' < ' (B B , 2' ;BU , ;:' < =B B=' 1 , ; , D< =, ' ;<' HB' BE , ?> , ;B=6' ;' U , 0' A DA' ; B:' < ' ;AB' < ;' U , 0' 0A<;' ;<' F B?B0:' , =' PO' B ' <>;' < ' , ' D , 0< ' < ' O ' A , =' HBB ' 22B=' < ' U<> =B=' A' AB' B B @' ;<< ' F<00B00 < ' < ' ;AB' > 0:' , =' BH> 2;' , =' B , B=' ;AB' < ;7' ;AB@' , 20<' B B0; , H2 0AB=' ;AB' > B=' < ;0' < ' , ' %> 0' , =' , ' C<0 ' < ' ;AB' ' D <> =' , ? D' 1 , ; , D< =, :' ;<' UA ?A' ;AB@' A , =' <;' F<00B00B=' ,' 0 , B' , ??B00' ; 22' ;AB' <>;B ' U< ' ' ;AB' >=' A , =' HBB ' ?, F;> B=6' AB0B' UB B' ;AB' <0;' , =E , ?B=' F< ;0' ;<U , =' , = R' UA ?A' ;AB' " B ?A' ?<>2=' A<2=:' , =' AB B' ;AB@' <> ;B=' ;AB ' AB , E B0;' D> 0:' ' ;AB' A<FB' < ' =B <2 0A D' ;AB' , 0;2B' < ' +> ; , 2B0' < ' ;AB' <;AB ' 0 =B' < ' ;AB' U , ;B :' , =' < ' , D' ;AB' B ' A , H<> ' >0B2B00' < ' 0A FF D6' AB ' F> F<0B' U , 0' < 2@' F , ;2@' , ??< F2 0AB=6' ;AB' 0A F0:' ;' 0' ; >B:' A , =' ;<' <EB' B , 0;' < ' EB0;:' ;<' ;AB' <>;B ' A , H<> ' < ' B , B ' ;<' ;AB' , , ??, ' , =' ;AB' 02, '=B' %B< 6' $>;' +> ; , 2B0' U , 0' BEB ' 0B <>02@' N> B=:' , =' , ; , B=' , ' ;B ; ;B ;' , ; 22B @' =>B2' U ;A' 1 , ; , D< =, ' , ? <00' ;AB' 0; , ;' ,0' 2< D' ,0' ;AB' 0 BDB' 2 , 0;B=6' AB' <??P 0 < , 2' H< H0' ;A , ;' B22' HB@< =' +> ; , 2B0:' ' ;AB' = B?; < ' < ' ;AB' < ; , => , :' = =' <;' 0B <>02@' ?< <=B' ;AB' D , 0< :' , =' 0A F0' ?<>2=' , 2U , @0' F , 00' ;AB' 0; , ;' HB;UBB ' ;AB' ;U<' < ;0' , ;' DA;' U ;A<>;' , FF B? , H2B' 0 6' %, ;B ' < ' <>2;' ?, >0B=' < ; , 0' < ' > F B?B=B ;B=' = B 0 < 0' ;<' HB' ?, 0;' ' ;AB' , 0B , 2' < ' BE 22B:' < ' ;AB' =B0 D 0' F B0B ;B=' ;<' A ' H@' , ' , ; 22B @' < ?B ' < ' ;AB' , B

' AB B' 0' , ' D<<=' , ??<> ;' < ' ;AB' =B0FB , ;B' 2 B' < ' ;AB' D , 0< ' < ' 1 , ; , Y D< =, ' => D ;AB' H< H , = B ;' ' ;AB' T2% ' :3' < %' ' ' 9 '' (#' 9 3. % ' H@' B DB , ;' * < , 2=0< ' < ' ;AB' 5O;A6

Spanish Infantry 1810

(showing the new uniform introduced under British influence)

< ' . 22, ; <@06' $>;' BEB ' UAB ' ;AB0B' A,=' HBB ' <> ;B=' < ' 1,;,D< =,' <' D B,;' =, ,DB' U,0' =< B:' < B' H< H' < 2@ V ,0' ,' F, 0A' F<F>2, '0< D' B?< =B= V BEB ' ;<>?AB=' ,= R' ;< E :' , =' ;A,;' < 2@' 22B=' ,'0; BB;' =<D6

;B ';AB' ,22' < ' 1,;,D< =,:' ;AB' BW;' <0;' <;,H2B' BEB ;' < ' ;AB' 0F D' ' < ;' < ' ,= R' U,0' ,' B, >2' A> ?, B:' 2,0; D' < ' ;AB' P;A' ;<' ;AB' 5;A' < ' 1, ?A:' UA ?A' ?,>0B=' D ,EB' 2<00B0' ;<' ;AB' EB00B20' ';AB' <>;B 'A, H<> 6' '0<>;A UB0;B ' < ';AB' ;2, ; ?' = <EB' ;A BB' F, 0A' 2 B < H,;;2B' 0A F0:' < B' < ' UA ?A:' ;AB' 0 %) ' U,0' ,';A BB =B? B ' < ' ' D> 0:' , =' ,' +< ;>D>B0B' 4O:' >F< ' ;AB' ?<,0;' ,H<>;' +>B ;<' , ;,' 1, ,' , =' <;,6' AB' " B ?A' <FB B=' >F< ' ;AB ' U ;A' B= A<;' 0A<;:' , =' =B0; <@B=' ;AB ' ,22:' 02,@ D' ,' D B,;' F, ;' < ';AB' > < ;> ,;B' ? BU0:' UA<' A,=' <';A<>DA;' < ' B0 0;, ?B:' , =' UB B' < 2@' ; @ D' ;<' B0?,FB' ;<' 2, =:' UAB B' ;AB@' UB B' H<> =' ;<' HB?< B' F 0< B 06' 1 < B' ;A, ';A ;@' B ?A, ;' 0A F0:' <0;2@' $; 0A:' UB B' =B0; <@B=' H@' ;AB' 0, B' 0;< 6' B' U,0' ,'; , 0F< ;' ?< ;, D' ,' U D' < ';AB' O;A' BD Y B ;:' UA ?A' U,0' ?< D' ;<' B < ?B' ;AB' D, 0< ' < ' ,= R6' < B' ' B ' < ' ;A 0' > 2>? @' EB00B2' D<;' ,0A< B' , =' UB B' ?,F;> B=' H@' ;AB' " B ?A6

' < ;A' , ;B ';AB' 2<00' < ' 1,;,D< =,' ;AB' <>;B ' A, H<> ' < ' ,= R' ,D, ' 0,U' 0< B' BW? ; D' 0?B B06' 1 << B=' HB0 =B' ;AB' F, 0A' 2BB;' UB B' ,' > HB ' < ' F< ;<< 0:' <2=' B < U, ' < ' UA ?A' ;AB' ,0;0' , =' DD D' A,=' HBB ' B <EB=:' , =' UA ?A' UB B' >0B=' ,0' F 0< 0A F06' ';AB ' ;AB B' UB B' 0; 22' BF;' 0BEB ,2' ;A<>0, =0' < ' " B ?A' F 0< B 0:' <0;2@' ;AB' B ' ?,F;> B=' U ;A' * >F< ;' ' 6' ;' 0' ,0;< 0A D' ;A,;' ;AB' BDB ?@' A,=' <;' < =B B=' ;AB ' B <E,2' ;<' 0< B' < B' B <;B' 0F<;' ;AB' < B ;' ;A,;' . ?;< 80' , @' ,FFB, B=' ' < ;' < ' ,= R6' EB ? <U=B=:' , =' < ;B ' BF;' U ;A<>;' 0> ? B ;' <<=' < ' =,@0' ,;' ,' ; B:' ;AB0B' > A,FF@' ?,F; EB0' UB B' ' ,' =BF2< ,H2B' F<0 ; < 6' AB' 0 DA;' < ' ;AB ' B22<U ?<> ; @ B ' ' F<00B00 < ' < ';AB' <FF<0 ;B' ?<,0;' = <EB' ;AB ' ;<' =B0FB ,; < :' , =' ;AB@' UB B' F BF, B=' ;<' ;, B' , @' 0 0' < ' ,' ?A, ?B' < ' B0?,FB6' ,E D' <;B=:' => D' ;AB' A> ?, B' < ' 1, ?A' P;A 5;A:' ;A,;' BEB @' EB00B2' UA ?A' H < B' 2<<0B' < ' ;0' << D0' A,=' HBB ' ?,0;' H@' ;AB' 0B;' < ' ;AB' ; =B' >F< ' ;AB' ?<,0;' ' ;AB' = B?; < ' < ' <;,:' ;AB' F 0< B 0' < ' ;AB' ('33 ' < ' UA ?A' B, 2@' ,22' ;AB' < ?B 0' UB B' ?< B=:' U, ;B=' < ' ;AB' BW;' 0<>;A UB0;B 6' & AB ' ;' ?, B:' < ' ;AB' DA;' < ' ;AB' ;A P;A

, @' " B ?A' ' ;AB ' =0;:' , 0B=' <;0:' , =' 22B=' 0< B' < ' ;AB' F 0< B 0 6 AB B>F< ' ;AB' BDB ?@' < =B B=' 4: ' < ' ;AB ' ;<' HB' F2, ?B=' >F< ' ;AB' =B0<2, ;B' <? ' < ' ,H B ,:' UAB B' ;AB B' UB B' <' A,H ;, ;0' , =' <' 0AB2;B ' 0, EB' < B' 0 ,22' > B=' ?, 0;2B6 AB' U B;?AB=' ?, F; EB0:' U ;A<>;' << 0' < ' ;B ;0' ;<' ?<EB ';AB :', =' 0>FF2 B=' U ;A' <<=' < 2@' , ;' > ?B ;, ' ;B \ ,20', =' ' 0> ? B ;' M>, ; ;@:' = B=' < ' 2 B' 2 BO6 ?B:' UAB ' 0;< 0' A =B B=' ;AB' , E,2' < ' ;AB' F <E 0 < ' 0A F0' < ' 1 ,N< ?, :' , @' 0?< BO' FB 0AB=' ' ,' =, @' < ' 0ABB ' 0; , E, ; < ' A' AB' 2, DB ' A, 2 ' = =' <;' 0> E EB' ;<' 0BB' ;AB' FB, ?B' < ' O:' , =' ;A<0B' UA<' = =' UB B' < ' ;AB' <0;' F, ;' B B' U B? 0' < ' B :' E,2 =0' < ' 2 B6 #EB ' ,22<U D' < ' ;AB' =B0FB , ;B' 0; , ;0' < ' ;AB' F, 0A' D<EB B ;:' UA ?A' ?<>2=' <;' BB=' ;0' <U ' , B0:' ;AB' ; B, ; B ;' < ' ;AB' ,H B ,' F 0< B 0' U,0' =B B 0 H2B6 AB@' DA;' , ;' 2B, 0;' A, EB' HBB ' BW?A, DB=' < ' 0< B' < ' ;AB' > B <>0' F, 0A' D, 0< 0' ; , B ' ' 7' H>;' ;AB' BDB ?@' U<>2=' <;' FB ;' ;:' ;A<>DA' B @' 8 * < B22' A, =' , , DB=' U ;A' 1 , ?=< , 2=' ,' BD>2, ' %3' < ' F 0< B 0' ' ;AB' B DAH<> D' , ; , 2< , 6 A 0' 0' < B' < ' ;AB' <0;' 0B , H2B' ?< B 0' < ' ;AB' A 0;< @' < ' ;AB' +B 0>2, ' & , 6

$>;' ;<' B;> ' ;<' =, 2>0 , 6 $@' ;AB' < ;A' < ' 1 , @' ;AB' BDB ?@' , ;' , = R' A, =' B?<EB B=' ,' ?B ; , ' ?< =B ?B:' ' E BU' < ' ;AB' >; ;B ' B ?, ?@' < ' . ?;< 8O' , ; ;B F;' ;<' <2B0;' ;AB ' ? ;@6 " < ' ;A, ;' < ;A' HBD, ' ,' 0@0;B , ; 7' , ; ;B F;' ;<' < D, RB' ;<' ,' 0 D2B' 0@0;B ' , 22' ;AB' < ?BO' ;A, ;' ?<>2=' HB' ;> B=' ;<' , ??<> ;' , D, 0;' <>2;6 AB B' UB B' <U' ' ;2 B' 02, ' 0< B : ' F, 0A' ; <<F0:' , 0' UB22' , 0' : ' $; 0A' , =' +< ;>D>B0B6 A 0' U,0' ,' 2, DB ' D, 0< ' ;A, ' U,0' BB=B=:' <U' ;A, ;' ;AB' =B B ?BO' A, =' HBB ' F>;' ' < =B 7' , =' ;' U, 0' F<00 H2B' ;<' =B; , ?A' 0 ,22' BWFB= ; < , @' ?< F0' ;<' B, 0;' , =' UB0;:' ;<' 0; ' >F' ; <>H2B' ' ;AB' ?<, 0;2, =' < ' =, 2>0 , :' , =' 0B EB' , 0' ;AB' >??B ' <> =' UA ?A' ;AB' 0> DB ;0' < ' ;AB' <> ; , 0' DA;' D, ;AB 6 "< ' ;AB' 0> Y B?; < ' ' ;AB' B <;B ' ?< B 0' < ' ;AB' D=< ' < ' (, , =, ' A, =' BEB ' = B=' =<U :' =B0F ;B' < ' ,22' ;AB' B < ;0' < ' BH, 0; , Q' ;<' M>B22' ;6 AB' BDB ?@' A, =' <U' =B;B B=' ;A, ;' , ' B < ;

7') <;A D' ?, ' HB' < B' = 0; B0O D' B, = D' ;A, ' ;AB' ?A < ??BO' < ' ;AB' ,H B ,' F 0< B 0:' * >?< :' (> 22B , =:' (22B' , =' <;AB 0 6 ?;>, 2' ?, Y H, 2 0 ' 0' 0, =' ;<' A, EB' <??> B=' => D' ;AB' 2< DB0;' < ' ;AB' 0FB220' < ' ,0; D' ?, >0B=' H@' ;AB' < , E,2' < ' F <E 0 < 0 6 X BB' (22B:' F6 O 6S

; <<F0:' ;AB@' U<>2=' B,0 2@' BWFB2' ;AB' " B ?A' , =' 0 0;B ' ;AB' UA<2B' ?<> ; @ 0 =B6 2 B,=@' ;AB ' ,?; E ;@' A,=' F <=>?B=' ,E<> ,H2B' B0>2;0:' < ' <>2;' 0B ;' =<U ' < ' BE 22B' (, =80 = E 0 < ' < ' ;AB' ;A' < F0:' ,' =B;,?A B ;' UA ?A' 2B ;' 1 < ; B ' ;<<' UB, ' < ' , @' 0B <>0' <FB ,; < 0' < ' ;AB' 0 =B' < ' #0; B ,=> ,:' , =' BH,0; , ' = BU' H,? ' < ' , ' BWFB= ; < ' ,D, 0;' 1 > ? ,:' UA ?A' DA;' <;AB U 0B' A,EB' F <EB=' <0;' F BN>= ? ,2' ;<' ;AB' F, 0A' ?,>0B6

A 0' , =' =B0B EB0' ,' U< =' < ' <; ?B' 6 N>0;' , ;B ' $2, B' A,=' 2B ;' 1 > ? ,' < ' ,= R:' BH,0; , ' IUA<' A,=' < ' ;AB' < B ;' D<;' ;AB' HB;;B ' < ' ;AB' 0> DB ;0' ' ;AB' 2F>N, ,0J' ,00B H2B=' ,;' $,R,:' ' ;AB' B,0;B ' BW; B ;@' < ' ;AB' D=< ' < ' (, ,=,:' ;AB' D B,;B ' F, ;' < ' ;AB' O;A' < F0:' , =' , ?AB=' U ;A' - """' B ' < ' %< ?,6' " B B:' = 0; >0; D' A 0' ; <<F0:' B >0B=' ;<' DA;:' ;A BU' O: ' B ' ;<' ;AB' F BD ,H2B' A, H<> < ; B00' < ' , ;,DB ,:' , =' B; B=' U ;A' ;AB' B0;' < ' A 0' ,8 @' ;<' 2?, ;B:' U ;A ' ;AB' H< =B 0' < ' . ,2B ? ,6' A>0:' ;AB' ?A' ?;@' < ' 1 > ? ,:' ,2< D' U ;A' ;AB' UA<2B' < ' ;AB' B0;' < ' ;0' F <E ?B:' UA ?A' A,=' BEB ' 0BB ' ;AB' " B ?A' HB < B:' U,0' BWF<0B=' > =B B =B=' ;<' BH,0; , 6' B' B ;B B=' ;' < ' F 2' :' , =' ?< B ?B=' H@' D' ;AB' ?< F< ,; < ' : ' =<22, 0' < ' <;' A,E D' B?B EB=' A ' U ;A' ,' <@,2' 0,2>;B' , =' ;AB' D D' < ' ;AB' HB220' < ' ;AB ' ?A> ?AB06' AB' B0;' < ' A 0' HBA,E <> ' U,0' ' BBF D66AB' B ;B B=' ;AB' ?,;AB= ,2' UA 2B' ,00' U,0' ' F <D B00:' , =' ;B >F;B=' ;AB' 0B E ?B' ;<' 0B RB' ;AB' F2,;B' , =' NBUB206' B' ?< 0?,;B=' ;AB' < B@' , =' <;AB ' E,2>,H2B0' ' ,22' ;AB' < ,0 ' ;B 8 B0:' A<0F ;,20:' , =' H, 06' B' FB ;;B=' A 0' < ?B 0' ;<' H2,? Y , 2' , @' ?A' A,H ;, ;0:' , =' A 0' , ' , =' 2B' ;<' F2> =B ' A<>0B0' , =' 0A<F06' U<' =,@0' , ;B ' A 0' B ; @' AB' B; ,?B=' A 0' <<;0;BF0:' , =' B; B,;B=' A,0; 2@' ;<U, =0' (, ,=,:' 2B,E D' ,' > B=' ? ;@' HBA =' A ' AB' ?,>0B' < ' A 0' 0>==B ' =BF, ;> B' U,0' ;AB' BU0' ;A,;' ;AB' 0> DB ;0' < ' ;AB' 2F>N, ,0:' UA< ' AB' A,=' E, 2@' ,D B=' ;A,;' AB' A,=' ? >0AB=:' UB B' HB2B,D>B D' , '' A 0' 0 ,22' D, 0< 0:' , =' ;A,;' 1 ,2,D,' ;0B2 ' A,=' HBB ' 0B RB=' H@' ,' 2, TDB' H, =' < ' ;AB' B , <0:' , =' AB2=' < ' ,' 0A< ;' 0F,?B:' ;A<>DA' (B B ,2' +B B@ < =' A,=' , ;B U, =0' 0>??BB=B=' ' = E D' ;AB ' <>;6' $>;' ;AB' UA<2B' < ' ;AB' 2A, ,' , =' < =,' B ,0' UB B' >F' ' , 0:' <' 2B00' ;A, ' ;AB' < B' B,0;B ' A 220' UAB B' ;AB' 0 D' A,=' HBD> 6' ;' U<>2=' A,EB' HBB ' ,H0> =' < ' BH,0; , ' ;<' F <?BB=' , @' > ;AB

T "< ' 0; , DB' , =' 0?, =,2<>0' =B;, 20' < ' BH,0; , 80' =< D0' ' 1 > ? ,:' 0BB' ?ABFB2B :' 6 FF6 PPP 46

< ;AB 0<>;A < , >22 < ;A: UAB ;AB@ UB B >?A BB=B= H@ <>2; <;AB = B?; < 06 !_B; ;AB BE 2 B0>2;0 < % , ?@80 ; = , <B>E B0 , = A , 0;@ 2 DA; >F< ;AB < , 2B < ;AB 0> DB ;0 DA; A , EB HBB 0> ? B ;2@ D B , ; ; < ?<> ;B H , 2 , ?B ;AB0B 0 , 22 , =E , ; , DB0: ;AB B , <0 A , = HBB 2B00 ;<>DA , = B0<2>;B6 ; 0 0> F 0 D ; < = ; A , ; ;AB@ = = <; 2<0B ?<> , DB: H>; BF; ;AB 0 D , <<; U ;A > = 0AB= B B D@: HB D , FF , B ;2@ ?< B= ;AB 0B2 ?< =B ?B H@ ;AB F<< 0A<U , =B H@ ;AB BD>2 , , @: , ;AB ; A , = 0AB , ;B B= , ; ;AB B B?; EB 0>??<> 0B ; ;AB < , = R6 * B0F ;B < , 22 ;AB B < ;0 < <>2;80 2@ D ?<2> 0: ;AB@ ?<>2= <; HB B ; B2@ = 0FB 0B=: ;A<>DA ;AB@ UB B A> ;B= , A> = B= ; B0 < E , 22B@ ; < E , 22B@6 AB F<UB < ;AB E ?B <@ < = , 2>0 , 0;<FFB= 0A< ; , ; ;AB <<; A 220: ;A<>DA A 0 = , D<< 0 BF; ;AB F2 , 0 0>HNB?; < 6 #EB @ ; B ;A , ; < = , , = ;AB <;AB 0<2 , ;B= D , 0< 0 ;AB <> ; , 0 A , = ; < HB BE ?;> , 22B=: ;AB ?< E<@ A , = ; < DA; ;0 U , @ ; < ;0 =B0; , ; < ;A <>DA 0U , 0 < K 0 F D8 0> DB ;0

AB BDB ?@ A , = <; @B; =< B U ;A % , ?@ , = A 0 BWFB= ; < , @ < ?B6 ;B ;AB@ A , = 2 , < 0< B ; B > =B ;AB6 U , 220 < (H , 2; , : ;AB@ UB B B H , B= , = ; , B H , ? ; < , = R: < UAB B , 0A< ; ; B , ;B ;AB@ UB B = 0F , ; ?AB= < , , = ;AB < = , =< =B) BH2 , 6 ;A 0 BD < : UAB B <F< 0 U , 0 , A8B , =@ , 0: ;AB " B ?A < ?B0: > =B B < = , = ;AB * > B < B HB D: UB B 0< UB , ;A , ; ;AB C> ; , HB2 BEB= ;A , ; % , ?@80 = E 0 < U<>2= B , 0 2@ ??B , ;AB UA<2B ?<> ; @ 0 =B < ;AB B B @6 ;0 2 HB , ; < U<>2= HB <0; E , 2> , H2B: HB? , >0B , = R U , 0 U< ; ; < = , U H<; A ?< , = ? , ; ; 2B < ;AB 2 , =0 HB; UBB ;AB < ; < , = (> , = , , : , = A , = B2; H ; ; B 2@ ;AB U , ; < ;0 , ??>0; < B= 0>FF2 B0 0 ?B ;AB U , A , = HBB ? , B= ;A ;AB 6 % , ?@ 2 , =B= ;AB $, @ < >B2E , < >D>0; / , U ;A B , 2@ : B 6 B A , = ;AB D<<= < ;> B ;< BB; , = ;< <EB ?< B 0>??B00 < ;U< 0 , 22 " B ?A ?<2> 0 UA ?A , ?AB= , D , 0; A < < 1 <D>B , = < , C> , =B2 +>B ;<6 AB B>F< ;AB * > B < B HB D V UA<0B UA<2B < ?B ;A 0 BD < U , 0 2B00 ;A , : B I ; U< H , ; ; , 2 < 0 < ;AB = < ;AB 2 B , = ;AB 4 ; A A , 00B> 8OJ V BE , ?> , ; B=) BH2 , , = B22 H , ? < BE 22B6

" < 22>0; , ; EB , B?=<; B0 < U , , B ;AB B , , =B < = , : 0BB ;AB , >; <H <D , FA@ < <??, < ;AB = >00 , 0: UA< U , 0 H>0@ ;A 0 BD < ;AB 0F D , = 0> B < 6

+#) ')' #' ' X ><6

<F< 0:' UA<' A,=' HBB ' ;<2=' ;<' N< ' %,?@' H>;' A,=' ,2B=';<' B?B EB' A 0' 0; >?; < 0' ' ; B:' F> 0>B=',' 0BF, ,;B' " B ?A' ?<2> '> =B ' (B B ,2' B < =' < '0< B' = 0;, ?B:' H>;' U,0' 0<< '0;<FFB=' H@';AB' BU0';A,;',2, DB' < ?B' U,0' <E D',D, 0;' A :';<' BF, ';A 0' ?AB? ';<';AB' " B ?A', 06 %,?@:' B, UA 2B:';<';AB'0> F 0B', =' = 0D>0;' < ';AB' A,H;, ;0' < ';AB' < =,=<:' B B H, B=' < ' >D>0;' 5', =' UB ;' H,? ';<' ,=R:' F < B00 D';<' BD, =';AB' F> F<0B' < ' A 0' BWFB= ; < ', 0' ?< F2B;B=6 B' A,=';A 0' >?A' N>0; ?,; < :';A,;';AB' BU0'< 'A 0' , =' A,=' =>?B=' <>2;';<' 0B =' <>;',D, 0;' A :' ,;',' <0;' ? ; ?,2' < B ;:';AB' , 'H<=@' < ' (,R, 80' = E 0 < :' UA ?A' , ?AB=';<') BH2,:' E, 2@' 0<>DA;';AB' BWFB= ; < , @' < ?B:', =' B;> B=';<' ;0' H,0B', ;B ' U,0; D' ,' < ; DA;6 $>;',' 2, DB ' D, 0< ' U,0' <U' 2B ;' ' & B0;B ' =,2>0 ,:' <F< 0' U,0' A> ;B=' < B' E D< <>02@';A, 'HB < B:', =' ? >B2' BF 0,20' UB B' ,=B' < ' ;AB' A,H;, ;0' < ' 1 <D>B ' , =' >B2E,:' UA<' A,=', =B=' %,?@6

"BBH2B',0' ;' A,=' HBB :' %,?@80' , =' < ';AB' < =,=<' A,=' 0;,EB=' < ',' 0B <>0' =, DB ';<';AB' F, 0A' @' < ' #0; B ,=> ,:' H@' < ? D' <>2;';<' =B;,?A' (,R, ',D, 0;' A :',;',' < B ;' UAB ' AB' U,0' ?< ?B ; ,; D';AB' ;A' < F0' < ',' H2<U' ,;' %,' < , ,:' , =' U,0',2 B,=@' B D,DB=' ',?; EB'<FB ,; < 0',D, 0;';AB' 1, M> 06' ?< F2B;B' ?A, DB' A,=';, B ' F2,?B' ';AB' 0 >,; < ' ' #0; BY ,=> ,',;';AB' B =' < ' C>2@:' UAB ' B@ B :',?; D' =B ' < =B 0' < ' 1,00B ,' ' A,=' , ?AB=' < ;AU, =' 8< ' A 0' <2=' H,0B',;' 1 B =,' , =' 1 B=B22 :' , =' ? <00B=';AB' ,D>0' ,;' ;AB' B @' < ' 2?< B;, ' ,H<EB';AB' H < B ' H =DB' < ' 2?, ;, ,' ' IC>2@' PJ6' A 0' B <E,2' < ';AB' UA<2B' =' < F0';<';AB' < ;A:' <22<UB=' I,0' UB' A,EB',2 B,=@' 0BB J' H@';AB' ?< B0F< = D'; , 0 B B ?B' < ' 228 0' $; 0A' < ?B' < ' +< ;,2BD B';<';AB' B DAH<> A<<=' < ' ,0;B22<' $, ?<:' A,=' 2B ;' %,' < , ,',;' $,=,N<R' U ;A' <' B B @' ' < ;' < 'A :', =' A,=' ?,>0B=',' ?< F2B;B' >F;> B' < ' ?< > ?,; < 0' HB;UBB ';AB" B ?A' @' < ' =,2>0 ,', =';AB' @' < '+< ;>D,2:' UA<' ?<>2=' < ';AB' >;> B' < 2@' AB, '< 'B,?A' <;AB 'H@';AB' ? ?> ;<>0' <>;B' ;A <>DA' 1,= =:' 0 ?B';A,;' H@' 2 , ,R' U,0' ??<0B=6

T BB' FF6 OP 4' < ';A 0' E<2> B6

T) <;' , B=' ', @'?< ;B F< , @' ,F';A,;' 'A,EB' 0BB 6 ;' 0' 0 ;>,;B=:' A<UBEB :' <FF<0 ;B' ;AB' N> ?; < ' < ';AB' EB ' 2 < ;B' U ;A' ;AB' ,D>0:' ,H<>;' B DA;BB ' 2B0',H<EB' 2?, ;, ,:' B, ';AB', ? B ;' > B=' H =DB' < ' 2 A -(

$ 1 # ') . * # ' # # * '

;A , ;' ;0' BW 0;B ?B' U<>2=' , ==' ;<' ;AB' ?2 , ; < ' UA ?A' ;AB' 1 , M> 0' B2;' < '< B 0 EB' =B < 0; , ; < 06' AB' BE ; , H2B' B0>2;' <22<UB=6' * 0M> B;B=' H@' ;AB' , ?; E ;@' < ';AB' #0; B , => , ', @V ;0' , = D' F , ; B0' A , =' , 2 B , =@' F B00B=' , 0' , ' , 0' , ; ;' 2 , 22 , ' < ';AB' BE 22B' <, =:' , =' < 0; , ; , ' < ' ;AB' < =<E , ' <, = V <>2;' < =B B=' 1 < ; B ' ;<' ?< ?B ; , ;B' ;AB' , ' H<=@' < ' ;AB' ;A' < F0' , ;' < M> 22<:' , =' ;<' , ;; , ? ' ;AB' B B @6' % , ' < , ' D , EB' H , ? ' , ;' < ?B:' BE , ?>, ; D' ;AB' F , 00B0:' H>;' A 0' B , D>, =' U , 0' <EB ; , B ' , ;' ">B ;B' , ;<0:' HBA =' 1 < , 0;B <:' H@' ;AB' " B ?A' A< 0B' I BF;6' J6' 0' ?, E , 2 @:' > =B ' %, ' , B , ' ;> B=' ;<' H , @' ;<' ?<EB ' ;AB' B; B , ;:' H>;' U , 0' ?A , DB=' , =' 0?, ; ;B B=' U ;A' AB , E@' 2<00' H@' $?AB8' 0' A , 00B> 0:' EA<' ?, F ;> B=' ;AB' H , ; ;B @' ;A , ;' , ??< F , B=' ;:' , =' B EB2<FB=' , ' 2 , DB' , 00' < ';AB' HB , ;B ' A< 0B B :' UA<' U<>2=' A , EB' HBB ' < ?B=' ;<' 0> B =B ' ' 1 , ==B 8' 0' +< ;>D>B0B:' ?A , D D' , ;' ;AB' DA;' < B ;:' , =' U ;A' D B , ;' E D<> :' A , =' <;' ?AB? B=' ;AB' " B ?A' , =E , ?B:' , =' D EB ' ; B' < ' ;AB' <>;B=' H D , =B0' ;<' 0 , EB' ;AB 0B2EB0' ';AB' A 2206' 1 , ==B :' ;A<>DA' F> 0>B=' H@' ;AB' " B ?A' B0B EB0:' , =B' , ' 0;B , =@' , =' 0>??B00 >2' B; B , ;:' U ;A' 0 , 22' 2<006' AB' F , =0:' A<UBEB :' 2B ;' HBA =' ;AB ' 0 W' D> 0' , =' P ' 22B=' , =' U<> =B=:' UA 2B' ;AB' " B ?A' 2<00' A , =' <;' BW?BB=B=' 6 1 < ; B ' ;AB ' F> 0>B=' %, ' < , ' ;<' 3 , :' , =' F>0AB=' A 0' , =E , ?B=' ?, E , 2 @' , 0' , ' , 0' " >B ;B' =B2' 1 , B0; B:' < 2@' ;A ;@' 2B0' < ' $, =, N<R6' A>0' ;AB' 0 ;>, ; < ' UA ?A' & B22 D;< ' <0;' = B , =B=' A , =' ?< B' ;<' BW 0;B ?B' < ?B' , D , G , ' ?< 0 =B , H2B' " B ?A' , @' U , 0' <E D' ;<' ?B ; , 2' #0; B , => , :' , =' ;A B , ;B Y D' ;AB' 2B ;BN<' < ; B ' 0<>;A' < ';AB' , D>0:' , ;' , ' < B ;' UAB ' BEB @' , ' < ';AB' D2< +< ;>D>B0B' B2=' , @' U , 0' >22@' B F2<@B=' ' $B , ' H@' ;AB' , =E , ?B' < ' 1 , 00B , 6' $>;' , D , :' , 0' ' >D>0;:' 1 < ; B ' = =' <;' F>0A' A 0' , =E , ; , DB:' ;A<>DA' %, ' < , ' , ?;>, 22@' B; B=' HBA =' ;AB' , D>0' ;<' 1 < ; N<:' , ;B ' , 0 D' ;AB' D , 0< ' < ' $, =, N<R' ;<' ;0' >22' 0; B D;A:' , =' 2B ;' ;AB' * > B' < ' BE 0<' ;AB' <FF< ;> ;@' < ' 2 , @ D' 0 BDB' B ;AB ' ;<' ;A , ;' ? ;@:' ;<' 2 EB R , :' < ' BEB ' ;<' #2E , 0:' 'AB' 0A<>2=' 0<' F2B , 0B6' $>;' ;AB' D<EB D' , ?;' ' , 22' ;AB' <FB , ; < 0' < ' <>2;' , = A 0' 2 B>;B , ;0' , ;' ;A 0' FB <=' U , 0:' , 0' UB' A , EB' , 2 B , =@' F< ;B=' <>;:' ;A , ;' ' , ;@' D B , ;' ?< ?B ; , ; < ' < ';AB' " B ?A' < ' < B 0 EB' F> F<0B0' ;<< ' F2 , ?B:' ;' U , 0' < 2@' , =B

' * 00 , ; 0 B=' U ;A' , 22' 2 0' ?, E , 2 @' < ?B 06' %, ' < , ,' A , =' B <EB=' %, ' , B , ' ;<' ;AB' ?< , =' < ';AB' A< 0B:' , D' <EB ' A 0' <2=' , ; @' = E 0 < ';<' , 2<0' *8#0F , ,6

H@' U ;A= ,U D' ;AB' D, 0< ' ; <<F0' < ' 0< B' < B' < ' ;AB' , @' = 0;> HB=' BD < 0' < ' =,2>0 ,6 & AB ' ;AB' UA<2B' ;A' < F0' U,0' > ;B=:' , =' A,=' ,=E, ?B=' ;<' 3, ,:' & B0;B ' =,2>0 ,' U,0' ,2 <0;' 0; FFB=' < ' ; <<F06 =BB=:' ,;' BE 22B' ;0B2 :' <>2;' A,=' <;A D' H>;' A 0' BU' F, 0A' 2BE B0:' , =' ;AB' ?< E,2B0?B ;0' < ' A 0' ?B ; ,2' A<0F ;,2:' ;<DB;AB ' U ;A' 0< B' =B;,?A B ;0' B0?< ; D' ?< E<@0' UA ?A' A,FFB B=' ;<' HB' F,00 D' ;A <>DA' ;AB' ? ;@:' , =' A,=' HBB ' =B;, B=' ' < =B ' ;<' ,==' ,' BU' A> = B=' H,@< B;0' ;<' ;0' D, 0< 6 & AB :';AB B < B:' <F< 0' HBD, ';<' , B' A 0B2 ' B2;' < ?B' < B' ';AB' < =,=<' =B') BH2,:' , =' ,' 0B?< =' , = D' BWFB= ; < ' < ' ,= R' 2, =B=' ,;' >B2E,:' <>2;' B2;' EB @' > ?< < ;,H2B6

0' FB ;> H,; < ' < ' =' U,0' ? B,0B=' H@' BU0' < ' ;AB' #,0;6 BH,0; , Q' ,;' ;A 0' < B ;' A,=' HBB ' <2B0;B=' H@' =B < Y 0; ,; < 0' < ' ;AB' F, 0A' @' < ' 1 > ? ,' ,D, 0;' A 0' =, 6 $2, B' A,=' B;> B=' ' >D>0;' < ' ,= R' ;<' 0FB?;' ;AB' 0B?; < ' < ' A 0' < ?B0' UA ?A' AB' A,=' 2B ;' HBA =' > =B ' " B B:' , =' UA ?A' AB' A,=' <;' 0BB ' 0 ?B' F 26 B' A,=' F>0AB=' B?< ,00, ?B0' ;<' >B0?, ' ' ;AB' D=< ' < ' (, ,=,:' A,=' 0B ;' 0>FF2 B0' ;<' , =' ;AB' 0> DB ;0' < ' ;AB' 2F>N, ,0:' , =' U,0' HBD D' ;<' 0; ' >F' ,' BU' 0 D' < ' ;AB' 0 =B' < ' C,B 6 A 0' F <E< B=' BH,0; , Q' ;<' ?< ?B ; ,;B' ;AB' 2, DB 'F, ;' < ' ;AB' O;A' < F0:' , =' ;<' , ?A' ,D, 0;' A ' U ;A' : ' B ' H' $2, B' D,EB' H,? ' HB < B' A 0' B B @' ,0' , ' ,0' ;AB' B DAH<> A<<=' < ' 1 > ? ,:' UAB B' AB' A,=' F BF, B=' ,' < ; Y B=' F<0 ; < ' H@' > =,; D' ;AB' >B ;,:' < '0>H> H, ' F2, :' UA ?A' 0' U,;B B=' H@' , @' ?, ,20' = ,U ' < ' ;AB' EB ' BD> ,:' , =' H@' 0;<? ,= D' ,22' ;AB' E 22,DB06 "<> ;BB ' ;A<>0, =' BD>2, 0:' U ;A' ,' F<UB >2' , ; 22B @:' AB2=' ;AB' ,FF <,?AB0:' UA 2B' ,' ,00' < ' , B=' FB,0, ; @' A> D' , <> =' BH,0; , 80' , 06 AB' " B ?A:' A<UY BEB :' < 2@' ,=E, ?B=' ,0' , ' ,0' %BH 22,:' ;UB2EB' 2B0' < ' 1 > ? ,:' , =' ;AB ' A,2;B=' I >D6 J6 BH,0; , Q:' , ;B ' B?< < ; D' $2, B80' 2 B:' ;A<>DA;' ;' ;<<' F<UB >2' ;<' HB' B==2B=' U ;A:' , =' B; B=' ;U<' =,@0' 2,;B ' ;<U, =0' A 0' H,0B:' >?A' A, ,00B=' H@' ;AB' FB,0, ; @' < ' A 0' U,@6 $>;' => D' ;AB' ;A BB' UBB 0' ;A,;' ;' ;<< ' < ' ;AB' " B ?A' DB B ,2' ;<' ?< ?B ; ,;B' A 0' B2= < ?B:' ;<' , ?A' < ' 1 > ? ,:' , =' ;<' B;> :' ,22' A,=' D< B' ;<' U ,? ' , =' > ' HBA =

T AB' O;H' < F0' U,0' <U' ,' 2 ;;2B' 0; < DB ' ;A, ' ;' A,=' HBB ' ' ;AB' 0F D:' ;AB'_ =' BD B ;:' : ' 0; < D:' A,E D' N< B=' < ' 1,= =6 $>;' ;' U,0' 0; 22' 0A< ;' < ' ;0' (B , ' = E 0 < :' UA ?A' <U' 2,@' '%,' 1, ?A,:' H>;' A,=' BEB ' ? <00B=' ;AB' B ,' 1 < B ,6

A 6 AB 0> DB ;0 < ; ;AB 2F>N , ,0 A,= ?,F;> B= ;AB F< ; , ;; 0B,F< ;; ;<U 0 < 2 > B?, ; , = 1 <; 2: , = A,= D, 0< B= ;AB ; ?,0;2B0 U ;A ; ;AB , = < ; # D2 0A D> 0 0B ;; < ; (H ,2;, 6 AB FB<F2B < ; ;AB B , =B 2A, , A,= ?>;; ;AB <,=0 HB;UBB 1 ,2,D, , = (, ,=,: , = O: <> ; , BB 0 A,= ,;;,? B= (, ,=, ;0B2 7 ;AB@ UB B =B B, ;B= <>;0 =B ;0 D,;B0 H@ ;AB D, 0< < BF;6 O: H>;; UB B 0; 22 A, D D ,H<>;; ;0 E ? ;@6

AB BU0 < ,22 ;AB0B ; <>H2B0 A,= B,?AB= <>2;; UA 2B BH,0; , Q U,0 M> ;B <>;; < ;<>?A: 2<0;; ;< 0 DA;; ;AB D=< < 1 > ? ,6 AB@ > =<>H;B=2@ A,= ;AB F, ;; => ? D ;AB 1 , 0A,2 ;< B?,22 1 < ; B , = ;AB ;A < F0 < #0; B ,=> ,6 B < ?B < B = E =B= ;0 ;U< = E 0 < 0: = ,U D H,? (,R, ;;< BE 22B ;< < A 0 ?B ; ,2 B0B EB: UA 2B (, = U, ;?AB= ;AB F,00B0 ,0 HB < B6 1B, UA 2B <F< 0 A,= ,2 B,=@ HBB HB, ;B ;AB < =,=< H@ ;AB ?<2> < (B B ,2 B < = I BF;6 J: , = BH,0; , Q < A 0 B;> ??2B, B= ;AB B DAH< A<<= < (, ,=, , = 1 ,2,D, < 0> DB ;0: , = = <EB ;AB > ; , B,H2B H, =0 < ;AB 2F>N , ,0 ;< ; , B B >DB ;AB < ; , 06 1 <; 2 , =6 2 > B?, UB B H<;A B?<EB B=6 A>0 ;AB 0;< F,00B=: ,0 0<< ,0 ;AB ;U< " B ?A BWFB= ; < , @ < ?B0 > =B 1 < ; B , = BH,0; , B;> B= < ?B < B ;< ;AB >0>,2 D, 0< F<0;06

2@ ;U< < B ? =B ;0 B , ; ;< HB ?A < ??2B= ;AB =,2>0 , ?, F, D < 6 , FHB22: ;AB D<EB < < (H ,2;, : A,= B0<2EB= V 0< BUA,; ;<< 2, ;B V ;< 2B = ,; 0 ,22 =B; ,?A B ;; ;< , = ;AB (, ,=, 0> DB ;06 AB F2, UA ?A AB ?< ?B ;B= U ;A ;AB F, 0A D<EB < < B>; ,U,0 ;A, ;; %< = $2,@ B@ U ;A ;U< $; 0A H, ;;,2 < 0 < ;AB (H ,2;, D, 0< V ;AB = , = 5;A: , = ,; F, 0A BD B ;; I FB ,2 =B <2B=<J < B>;, : B ,22: 0A<>2= HB ;A < E < 0A< B ,; "> B D <2,: ;UB ;@ 2B0 < ;AB B, B 0 =B < 1 ,2,D, : UAB B ;AB B U,0 , 0 ,22 " B ?A D, 0< , = ,; =BF<;; < 0;< B0: UA ?A U,0 0B E D < ,6 H D,=B ;AB B D,DB= ;AB 0 BDB < 1 , HB22, : ;AB ;<U UA ?A A,= HBB D, 0< B= H@ %,?@ C> B : , = UA ?A U,0 0; 22 A<2= D <>;; D,22, ;2@ ?;<HB 6 ;; U,0 ?,2?>2, ;B= ;A, ;: < AB, D < , =B0?B ;, ;; ">B D <2,: BH,0; , U<>2= ?< B U ;A ;AB 2, DB F, ;; < ;AB D, 0< T BB F6 < ;A 0 ?A,F;B 6

P +#)) #' R&* (
< 1 ,2,D, ;< B2 BEB ;AB < ;6 $>; ;AB < B ; ;A, ; AB U,0
<U ; ;< HB B, D ;AB BWFB= ; < , @ < ?B: %< = $2,@ B@
U,0 ;< B B H, , = ;< , B , =,0A , ; 1 ,2,D, ;0B2 : UA ?A
AB ?<>2= B,?A < B 0U ;2@ H@ U, ;B ; A, BH,0; , 0 H@ 2, =6
B? B; F, ; 0, 0 U ;A ;AB ? ;@ UB B B,=@ ;< ; , B , 0: , =
;AB FB,0, ; @ < ;AB B , =B 2A, UB B ,20< B 2 0;B= ;AB
B ;B F 0B6 AB 0?AB B 0BB 0 2 ,H2B ;< , @ ? ; ? 0 0V ;AB
UA<2B U,0 , ; ;AB B ?@ < ;AB U =0 , = U,EB0 < 0;< @
?;<HB G UA, ; U<>2= A,FFB ; ;AB UB, ;AB U,0 ;<< <>DA ;<
,22<U< B B H, , ; < : < < B,0@ 2, = D , ; 1 ,2,D, P =
1 ,2,D, UB B ?,F;> B= < ;AB < B ; < A<U 2< D ?<>2=
: BD>2, 0: H,? B= H@ , ,00 < > = 0? F2 B= 0> DB ;0:
A<2= ; ,D, 0; ;AB UA<2B < BH,0; , 80 ?< F0: EA ?A U<>2= HB
A> 2B= >F< ; ; , ; 0A< ; <; ?B P AB BWFB= ; < : A<UBEB : U,0
<; ,?;>,22@ U B? B= < B ;AB < ;AB0B = , DB 0: H>; > B= H@
;AB <22@ < ; 0 ?A B 6 %< = $2,@ B@ 2, =B= 0>??B00 >22@ <
?;<HB : , = 2, = 0 BDB ;< ">B D <2, : UA ?A U,0 AB2= H@
+<2B0 > =B , ,F; , 1 2< <0 BU ;R6 0;B, = < , D
;AB , ; ; ,? , B B =B < 0; , ; < : AB H <>DA; 0< B F<> =B 0
,0A< B: , = 0B; ; < U< ; < H, ; ;B ; AB ?,0;2B ,22 0B <>0 B006
" = D ;0 U,220 ?< B ? D ; < ? > H2B: AB AB2= < : < ; U<
=,@0: ;A<>DA: AB A, = B 2B?;B=: AB >0; A, EB B B HB B= ;A, ;
;AB D, 0< < < 1 ,2,D, DA; HB U ;A A , ; , @ < B ;6
B U,0 H>0 2@ F BF, D < , ,00,>2; UAB BH,0; , 0 0>==B 2@
B22 >F< A U ;A : B < ;AB B, 6 FF, B ;2@ ;AB
D2 0A ?< , =B A, = BD2B?;B= ; < BBF >F , @ U, ;?A < ;AB 0 =B < ;AB 2, =: , = ;AB FB,0, ; @ A, = , 2B= ; < 0B = , @ ;B22 DB ?B < ;AB ,?; ;A, ; ;AB " B ?A UB B < ;AB <EB6
AB HB0 BDB 0: ; , B B ; B2@ H@ 0> F 0B: , = = 0; ,?;B= ,20< H@ , 0< ; B < ;AB 2 ; ;2B D, 0< : UB B <22B= =<U ; ; < ;AB 0B, 0A< B
?< >0 < 6 %< = $2,@ B@ V , 0A< ; 0 DA;B= , V <=B
, < D 0< B " B ?A UA< AB 0;<< < F, , =0: , = U,0
,=B F 0< B ; ;AB <0; D < <>0 ,0A < 6 AB F, 0A
BD B ; D<; < U ;A 2 ; ;2B 2<00G ; A, = BF; ;0 , 0: , =
< ?B= ;0 U,@ ; < ;AB H<, ;0 , ;B HB, ; D < , , ; ; ,? 6 AB
= U,0 F, ;2@ < 0A FH<, = , ; ;AB < B ; < ;AB ?< H, ;
, = ;AB ?< F, B0 UA ?A UB B < 0A< B 0, EB= ;AB 0B2EB0 H@
, 0;B, =@ B, D>, = , ?; < 6 $>; ;AB H, ; ; ,2 < < ;AB 5;A U,0
A,2 =B0; <@B=: 2<0 D <EB F 0< B 0 HB0 =B0 0< B < ;@

22B=6 AB >;;B ' ?,F,? ;@ <;K ;AB $; 0A ?< , =B ' 20 HB0;' 0A< E ' H@ ;AB ,?;' ;A,;' ' AB A,=' H>;' ?, B=' <>;' ;AB F2, ' < ' UA ?A AB U,0 ,?; D:' AB U<>2=' ?B ;, 2@ A,EB ?,F;> B=' 1,2,D,V < ' BH,0; , ' A,=' 2B ;' < 2@ ' B ' ' ;AB ? ;@ UAB ' AB , ?AB=' < ' ">B D <2,:' , =:' ' ;AB BWFB= ; < , @ < ?B A,=' B B H, B=' ;UB ;@ <> ' A<> 0 HB < B ;AB = 0,0;B :' ;' U<>2=' A,EB <> =' ;AB F2,?B F ,?; ?,22@ > =B B =B=:' , =' BH,0; , ' ,' 2< D =,@80 , ?A ,U,@:' , =' ?,F,H2B < ' B;> D ' ; B ;<' 0,EB ;

AB EB @ 2,0;' 2 ;, @ BEB ;' < ' ;AB @B, ' ' < ' ;AB =,Y 2>0 , ' 0 =B U,0 ,' = 0,0;B ' , ' U< 0B ;A, ' ;A,;' < ' %< =' $2,@ B@ V 0> B B=' H@ ,' DB B ,2 UA<0B ,2 <0;' > H < B ' 0B B0 < ' =B B,;0 6< ' 1 B= ,' =B <' B?<' =<U ' ;<' $B2?A ;B <>DA;' ;<' A,EB ;,>DA;' A ' H@ ;A 0 ; B ;AB ,=E, ;,DB0 < ' ?,>; < :' , =' ;AB =<>H; >2 F<2 ?@ < ' 0 D ,' =B < ,2 RB=' , @ ' ,' DA;' >F< ' <FB ' D <> =6 & AB ' BH,0; , ' B; B=' < ' ;AB D=< ' < ' 1 > ? ,' ' ;AB 0;' =,@0 < ' BF;B HB :' $2, B A,=' H <>DA;' H,? ' A 0 , @ ;<' ;0 <2=' F<0 ; < 0 < ' ;AB < ; B ' < ' ;A,;' B,2 6 BEB ' UBB 0 2,;B :' = D ;AB " B ?A 2 B ' < ;' < ' A ' EB @ UB, :' AB B0<2EB=' ;<' ; @ ,' =B < 0; ,; < ' ' < ?B:' < ' FB A,F0 BEB ' ,' 0B <>0 0; < B ,D, 0;' ;AB < ?B < ' ;AB B B @ ' (, ,=,6 ') <EB HB ' /' AB ? <00B=' ;AB 1 > ? , ' H< =B :' U ;A ' : ' <<;' , =' : ' A< 0B:' , =' <??>F B=' >22, 6

' ;AB BW;' =,@ AB U,0 ,;' ;AB D,;B0 < ' $,R,:' UAB B ;AB B UB B <> ' H,;;,2 < 0 < ' ;AB " B ?A < ?B EA ?A ?<EB B=' (, ,=, 6 $>;' < ' ;AB BW;' < D (B B ,2 1 2A,>=' <=B >F U ;A ,' F< EB >2 H<=@ < ' A< 0B B :' ;AB D B,;B ' F, ;' < ' A 0 <U ' = E 0 < ' < ' * ,D<< 0 , =' ;AB +<2 0A %, ?B 0 < ' BH,0; , 80 ?< F0 ' ?,E,2 @:' 0< B ' : ' B ' ' ,226 A<>DA AB A,=' < 2@ ' : ' , ; @ ;<' H,? ' A :' 1 2A,>=' =B;B B=' ;<' DA;' ,;' < ?B6 $2, B80 , @ E ;B=' , ' ,;;,? 7 ;' E,0 ,=E, ? D =<U ' ;AB A DA <,=' E ;A ;AB ?,E,A @ =BF2<@B=' ' < ;:' < B = E 0 < ' < ' , ; @ 0>FF< ; D ;:' EA 2B ,' 0B?< =' = E 0 < ' E,0 0< B 2B0

T %< =' $2,@ B@:' ,' 2 > < <>0 FB 0< ' 0,EB UAB ' ;AB ,H0> = ; B0 < ' A 0 <U ' N B B ,20A F UB B ' M>B0; < :' U <;B , ' ;B B0; D , ,; EB < ' A 0 K "< ?B=' C<> B@ ;<' " , ?B:8 UA ?A ?< ;, 0 < B < ' ;AB HB0;' ,??<> ;0 < ' ;AB 0;,;B < ' 1,= =' > =B ' 9 D C<0BFA80 D<EB B ;:' ,0 UB22 ,0 0< B ?> <>0 <;B0 < ' ;AB 0;,;B < ' ;AB # D2 0A F 0< B 0 ,;' . B = ' ' 6

T " < ' ;AB =' , =' ;A % B:' $B@80 H D,=B < ' BH,0; , 80 ?< F06 AB ;A:' ' H ' %(' %"' 5:%%(' WW6 4:' , =' ;B?AB 0 ,' 0F ;6 2,;' BD B ;' U,0 U ;A (, =' ' ;AB B ,' 1 < B ,:' ' 2B0 ,U,@6

+#) ')' #' ' 0

;<' ;AB' B, :' < ' ;AB' A 220' UA ?A' 0BF, ,;B' ;AB' F2, ' < ' $,R,' < ' ;AB' >F2, =' < ' ;AB' B ,' =B' ,6' ' B, D>, =' < ' : ' B ' U,0' 0; 22' ,;' > ', :' ;B ' 2BO' < ' ;AB' 0?B B' < ' ,?; < 6' AB' 0 ;>,; < ' >?A' B0B H2B=' ;A,;' < ' >?AB;8O' ?< H,;' < ' 1, D,2B :' , =' 2B=' ;<' ;AB' 0, B' B0>2;06' "< ' 1 2A,>=8O' 0M>,= < 0:' ?A, D D' B ?B2@' ,2< D' , =' < ' B,?A' 0 =B' < ' ;AB' <,=:' ?< F2B;B2@' <>;B=' $2, B8O' ?,E,2 @:' , =' = <EB' ;' H,? ' < ' ;<' ;AB' 2B,= D' , ; @' = E 0 < :' UA ?A' H < B:' , =' U,O' H,=2@' ?>;' >F' HB < B' ;O' B , ;O' ?<>2=' ;, B' 0AB2;B ' U ;A' ;AB' <;AB ' = E 0 < ' ' B0B EB' < ' ;AB' A 22' HBA =6' $2, B' D,EB' ;AB' < =B ' < ' , ' 0;, ;' B; B,;:' , =' 1 2A,>=' ?<>2=' <;' <22<U' , ' , < D' ;AB' <? 0' , =' 6=B 2BO6' $>;' AB' A,=' ?,F;> B=' ,' H,;;B @' < ' , ; 22B @' , =' ,' ;A<>0, =' F 0< B 0:' , =' 22B=' < ' U<> =B=' 0< B' ' B ' < B:' ' ;AB' BU' >;BO' => D' UA ?A' ;AB' B D,DB B ;' 2,0;B=6' AB' " B ?A' ?,E,2 @' 2<0;' <' < B' ;A, ' ' B 6' AB' , ; @' A,=' A, =2@' B=' ,' 0A<;6' $2, B:' <;' HB D' F 8O>B=:' B; B=' < 2@' ,O' , ' ,O' ;AB' .B ;,' =B' $,H>2' < ' ;AB' <;AB ' 0 =B' < ' >22, :' , =' B , B=' < ' ;AB' 1> ? , ' H< =B :' ?> B=' < ' ,' ; B' < ' A O' , ,' < ' ;, D' ;AB' < B 0 EB' ,;' ;AB' AB,=' < ' ,' =B < ,2 RB=' , @6

A>O' B =B=' ;AB' ?< ?2>0 EB' ?, F, D ' < ' ' ' =,2>0 , V' ;AB' " B ?A' < ' ;AB' 2,0;' =,@' < ' ;AB' @B, ' AB2=' ,2 <0;' F B? 0B2@' ;AB' 0, B' 2 ;O' < ' ;B ;< @' ;A,;' ;AB@' A,=' <??>F B=' < ' ;AB' 0;' < ' 1, ?A6' AB@' A,=' HB,;B ' ;AB' B B @' ' <> ' < ' EB' ?< 0 =B ,H2B' ,?; < 0:' @B;' A,=' D, B=' <;A D' ;AB BH@6' AB@' UB B' HBD D' ;<' > =B 0;, =' ;A,;' ,= R' U,O' F BD ,H2B:' , =' ;A,;' ;AB' ?< F2B;B' 0>HNB?; < ' < ' ;AB' <> ;, O' < ' ;AB' <>;A' , =' # ,0;' U,O' ,' , ' < B' 0B <>O' ;,0 ' ;A, ' A,=' HBB ' ,;' 0;' 0>FF<0B=6' A DO' =BB=' A,=' ?< B' ;<' ,' =B,=2<? :' , =' <>2;' BF;' BF< ; D' ;<' A O' ,0;B ' ;A,;' , <;AB ' : ' B ' U<>2=' HB' BM> B=' ;<' B ,H2B' A ' ;<' ?< F2B;B' A O' ;,0 6' 2 <0;' ,O' , @' H,;;,2 < O' HB2< D D' ;<' ;AB' 0;:' O;A:' , =' ;A' < FO' ,O' U<>2=' A,EB' ,=B' >F' ;A,;' < ?B' A,=' HBB ' 0B ;' H@' ;AB' # FB < ' ;<' F, 6' AB@' UB B' ;B =B=' ;<'N< ' ;AB ' BD B ;O' ' ;AB' B =:' H>;' B, UA 2B' ;AB@' A,=' HBB ' = 0; ,?;B=' ;<' ;AB' ;A' , =' 5;A' < FO:' , =' UB B' , ?A D' ' ;AB' = B?; < ' < ' +< ;>D,2:' UAB ' <>2;' U 0AB=' ;<' 0BB' ;AB ' < ' ;AB' (>,=,2M> E ' . B @' 2 ;;2B' < ';AB' ,00' < ' B < ?B B ;O' UA ?A

' AB' ;A' < FO' A,=' ' ;O' , O' ;AB' O;A' H,;;,2 < O' < ' ;AB' <22<U D' BD B ;O' UA<0B' 0;' ;A BB' H,;;,2 < O' UB B' ' ;AB' 0<>;A' < ' F, :' , =' HB2< DB=' ;<' ;AB' 0;:' O;A:' < ' P;A' ?< F0 V ;AB' ;A:' O;A:' , =' 4P;A6' $>;

A,=' HBB ' F<> B=' ;<' ;AB' +B 0>2,' ' ;AB' 0F D' < ' ' A,=' ?< B' A 0' U,@6 & A 2B' ;AB' UA<2B' H,;;,2 < 0' A,=' HBB ' 0B ;' ,U,@' U ;A' C> <;' < ' * <>B;:' ;AB' = , ;0' ' 0 ,22B ' > ;0' A,=' HBB ' 2, DB2@' ;B ?BF;B=' H@' ;AB' DB B ,20' ,2< D' ;AB' 2 B' < ' ?< Y > ?,;< 6' AB B' UB B' O: ' < ' 0>?A' B? > ;0' =B;, B=' ')BU' ,0;2B' ,2< B:' , =' < B=' ;<' K' F <E 0 < ,2' H,;;,2 < 0' 8' ;<' D, 8 0< ' 1 ,= =' , =' ;0' B DAH<> A<<=6' 9 D' C<0BFA' >0;' <;' HB' H2, B=' ;<<' >?A' < ';A>0' 0;<FF D' ;AB ' < ' ;AB ' U,@' G AB' A,=' HBB ' 2B ;' U ;A' , ' >;;B 2@' ,=BM>,;B' < ?B:' UAB ' ;AB' # FB < ';> B=' < 'BEB @;A D' < ' ;<' ;AB' = B?; < ' < ' +< ;>D,26' * > D' ;AB' 0> B ' , =' ,>;> ' < ' ' ;AB B' UB B' U ;A' A ' < 2@' ;U<' " B ?A' , ; @' BD B ;0' ;AB' 0, B' > HB ' < ' 2 DA;' ?,E,2 @' BD B ;0' %,A<>00,@B80' UB, '= E 0 < ' < ' = ,D<< 0' , =' ;AB' (B , ' = E 0 < ' < ' ;AB' O;A' < F0' 2B00' ;A, ' O: ' 0; < D:' <EB ' , =' ,H<EB' A 0' <U ' D>, =' , =' > ; >0;U< ;A@' KN> , B ;,=<8' H,;;,2 < 0' AB' <@,2' ; <<F0' > HB B=' ,H<>;' 4: ' B :' ;AB' <;AB ' > ;0:' ??>= D' <>2;80' =B;, B=' ?A , ;0:' ,H<>;' : G' U ;A' ;AB ' C<0BFA' A,=' ;<' D, 0< ' 1 ,= =:' E 2,:' BD<E ,:' <2B=<:' , =' 2 ,R:' , =' A<2=' =<U ' ,22')BU' ,0;2B' , =' %,' 1 , ?A, V UA ?A' 2,0;' F <E ?B' U,0' =B0? HB=' ,;' ;AB' ; B' ,0' K' F<F>2,;B=' 0<2B2@' H@' HBDD, 0' , =' H D, =0' 86' B' A,=' ;AB' =>;@' < ' , ;, D' ;AB' 0<2B' , =' EB @' ? ?> ;<>0' 2 B' < ' ?< > ?,;< ' HB;UBB ' <>2;' , =' 1 ,00? ,:' UA ?A:' , ;B ' B@ B ' UB ;' < ;A' ' C>2@:' A,=' ;<' HB' U< B=' E ,' 2 , ,R6' B' U,0' BM>B ;2@' , <@B=' <;' < 2@' H@' ;AB' # FB? ,=<' , =' <;AB ' D>B 22B <0:' H>;' H@' . 22,?, F,:' UA<' =B0?B =B=' < ' A DAB ' ,D< ' ;<' ;AB' >B ?,' BD < :' , =' H@' $2, B80' ?,E,2 @:' UA ?A' < ;B ' , =B=' %,' 1 , ?A,6' $>;' A 0' D B,;

;2 B' 5;A' < F0' U,0' ,2 <0;' B ; B2@' ?< F<0B=' < ' O;A' H,;;,2 < 0' < ';AB' ?< F0' < ' . ?;< :' BH,0; ,> :' , =' 1 < ; B :' ??>= D' ;2 <0B' < ';AB' ;A:' O;A:' O ;A:' O;A:' P =:' 5O;A:' 5 ;A:' 5(;A' % B:' , =' P;A' , =' 4;A' %BDB :' < ' ;AB' 0;' ?< F0:' , =' < ';AB' 4;A' %BDB :' , =' O ;2 :' ;2 :' ;A' , =' =' % B' < ';AB' ;A' < F06

T' ;A' , =' 4 ;A:' ;AB' B , D' H D,=B' < ' ;AB' 0;' * E 0 < ' < ' ;AB' O;A' < F0:' UA ?A' BEB 'N< B=' BH,0; , Q' ' =,2>0 ,6

b P;A' A,00B> 0' , =' =' *>;?A' >00, 06

^ 4;A:' ;A:' 5;A:' , =' 4;A' * ,D<< 0:' < 2@' ;U<' 0M>,= < 0' B,?A V < 2@' : ' B 6

' 0' ,' 0, F2B' < ' ;AB ' HBA,E <> ' ;' ,@' HB' B ;< B=' ;A,;' ;AB' UA<2B' D>, =' < ' ;AB' 0<>;A' D,;B' < ' <2B=<' < ?B' , ?AB=' < ' ;<' N< ' ;AB' 0> DB ;0:' < A?B 0' , =' ,226

B, U,0 2B0;% , < , < & B22 D;< 0A<>2= 0B = ; <<F0 >F ;AB E,0; D,F 2B ; HB;UBB B@ B , ; 3, R, , = < , , = 1 < ; B ; AB B , 1 < B , ; AB U,0 <;A D H>; %,A<>00,@B80 = ,D<< 0 , = ;U< , ; @ H,;;,2 < 0 ;AB UA<2B = 0; ?; ,H<>; 2 , ,R , = ,2,EB , UAB B 0>?A , H2<U U<>2= A,EB ,22B 6 ; U,0 0 ,22 U< =B ;A,; AB B2; > ?< < ;,H2B6 $>; 2 ;, @ 0<> ?B0 < = 0M> B;>=B < B= < 2@ ;AB 0 ,22B A,2 < 9 D C<0BFA80 ; <>H2B0 , ; ;A 0 = ,;B6 0 F<2 ; ?,2 EBW,; < 0: UA ?A B D <00B= , >?A 2, DB F< ; < < A 0 ; B , = B B D@: >0; HB =B,2; U ;A B20BUAB B6 AB@ E22 HB B2BD,;B= ;< ;AB 0, B ?A,F;B UA ?A ; B,;0 < ;AB BU =BEB2<FY B ; < F, 0A F<2 ; ?0 ?< 0BM>B ; < ;AB 2< D =B2,@B= BB; D < ;AB < ;B0 ;AB U ;B < 6

% & " ' O O

9 % & ' " @ ' & $ ' @ $

% ! $ '

1) 8 ' * .) #' ' $%

G' ;AB' ,22' < ' 2 B = ,' 1 ,00B ,' U, ;B=' >?A' 2< DB ' ;A, ' & B22 D;< ' A,=' , ; ? F, ;B=6' AB' B,0< 0' < ' A 0' =B2,@' UB B' ;AB' >0>,2' < B0' ;A, ;' UB B' ,2U,@0' < ;A?< D' UAB ' ,' " B ?A' , @' A,=' ;<' ,=E, ?B' ' ;AB' +B 0>2, V U, ;' < ' ; , 0F< ;' , =' FB > @' < ' 0>FF2 B06' AB' 1 , 0A,2' A,=' N>0;' = 0?<EB B=' ;A, ;' ;AB' ?<> ; @ 0 =B' ' < ;' < ' A ' A,=' ,2 B,=@' HBB ' =BF<F>2, ;B=' H@' & B22 D;< 80' < =B 0:' , =' ;A, ;' ;AB' < 2@' A,H ; , ;0' ;A, ;' UB B' ;<' HB' B;' U<>2=' HB' ;AB' , B=' =B , R,:' UA<' UB B' ,2 B,=@' 0A<<; D' , ;' A 0' EB=B;;B0' , =' , ;; ,? D' A 0' < ,D D' F, ; B06' + B' U,0' ?2 B=' ;<' ; B, ;' ;AB ' ,0' H D, =07 A 0' + <E<0; , 0A,2:' <2< B2' + ,EB;; :' A,E D' HBB ' 0> F 0B=' , =' ?, F;> B=' ,2< D' U ;A' EB' DB =, B0' < ' A 0' B0?< ;' H@' ;AB' E 22, DB 0' < ') ,E, ' =8 EB2' < ' BF;B HB ' :' AB' ?, >0B=' ;AB' F2, ?B' ;<' HB' H> B=:' 0A<;' ;AB' < B' < ' ;U<' ,2B' A,H ; , ;0' UA<' ?<>2=' HB' ?, >DA;:' , =' 00>B=' ,' F <?2, , ; < ' 0; , ; D' ;A, ;' <' M>, ;B ' U<>2=' HB' D EB ' ;<' ?< H, Y ; , ;0' U ;A<>;' > < 06' A 0' F <E< B=' ;U<' 0; ' 2B;;B 0' < ' & B22 D;< ' UA<' U <;B' ;<' 0,@' ;A, ;' ;AB' =B , R,' UB B' , ' ;BD ,2' F, ;' < ';AB' +< ;>D>B0B' 2 ;, @' < ?B0:' , =' ;A, ;:' ' ;AB@' U< B' <' > < 0:' ;AB' 1 , BA,2' 0A<>2=' B B HB ' ;A, ;' , @' < ' ;AB' BE<2>; < , @' H, =0' UA ?A' AB' A,=' ?< , =B=' ' ;AB' <2=' U, ' < ' 45 4' UB B' <' HB;;B ' BM> FFB=G K' E<>0' =BEBR' E<>0' 0<>EB ' M>B' E<>0 B B' E<>0' ,EBR' ,>D B ;B' 2, ' D2< B' =B' 8, BB' " , 8, 0B' B ' ?< , =, ;' =B0' 0<2=, ;0' M> ' 8, E, B ;' F, 0' =8> < B68' ' =B , R,' EB B' 0A<;' ,0' K' H D, =0' , =' A DAU, @' <HHB 0' 8' ' <HB= B ?B' ;<' ;AB' F <?2, , ; < ' < ' BF;B HB ' 4:' ;

' & B22 D;< ' ;<' 1 ,00B ,:' BF;6' 5' , =' BF;6' 6

9 ' 1 #) 8 ' * .) #' ' $ ' ' (' A' ' !C

U,0' ?B ; , ' ;A , ;' " B ?A' 0; ,DD2B 0' , =' < ,DB 0' U<>2='HB' <? B=' < ' ;AB' AB , =:' , =' <;' ; , B ' F 0< B T0:' H@' ;AB' B ,DB='FB , 0 , ; @6' ;' F B0B ;' ;AB' > HB ' < ' ;AB ' 0B ;' ' ;<' ;AB' $; 0A' AB , ='M>, ;B 0' H@' ;AB' +< ;>D>B0B' BD>2, 0' F <EB=' ;A , ;' ;AB' 2, U0' < ' U, ' UB B' HB D' <H0B EB=6' 1 ,00B ,' BF2 B=' ;A , ;' + , EB; ; ' A , =' HBB ' , H>0AB='H@' B ' UA<' A =' ;AB ' , 0:' , =' , ' ' >F< ' A ' , =' A 0' B0?< ;' UA 2B' AB' U,0' FB , ?B , H2@' ,0 D' A 0' U , @6' 0' 2B ; ; B ' ;AB ' UB ;' < ' , ;' , ' ; , DB ;:' ;<' = 0?>00' A DA' F<2 ; ?0:' , =' ;<' =B?2, B' ;A , ;' AB' U,0' <;' ;AB' B B @' < ' ;AB' +< ;>D>B0B' H>;' < ' ;AB' FB = <>0' $; 0A' D<EB B ;:' e?6:' e?6' " ,22@' AB' ?< F2, B=' ;A , ;' ;AB' D, 2' , =' , ?<0<' 2 ; ,:' UA< ' AB' A , =' 0B ;' A< B' , ;B ' ;AB' ,22' < ' 2 B = , :' A , =' ; , B ' >F' , 0' , D , 7' ' ?, >DA;:' K'2B> ' 0< ;' 0B ,' > B0;B' 8' AB' 2 , 0;' 0; , ;B B ;' & B22 D;< ' =B B=7' AB' 0 , =' ;A , ;' ;AB' ?, F ;>2, ; < ' A , =' HBB ' , >22B=' H@' ;AB' " B ?A' ;AB 0B2EB0:' UAB ' ;AB@' =BH , >?AB=' ;AB' 0;A' BD B ;:' , =' =B; , B=' P ' < ' ;AB' 2 ; ,' ;<' < ' , ' H , ; ; , 2 < ' < ' F < BB 0:' H>;' 0; , ;B=' ;A , ;' ,0' ,' , ; ;B ' < ' , ?;' ;AB' 2 ; ,' H , ; ; , 2 < 0' A , =' <;' HBB ' B B H<= B=6' AB' " B ?A' ?< ; >B=' ;<' 0A<<;' ;AB' =B , R , :' , =' ;AB' =B , R , ' 0<< ' HBD , ' ;<' BF2@' H@' ;< ;> D' ,0' UB22' ,0' A , D D' " B ?A' 0; , DD2B 07' & B22 D;< ' < H , =B' H>;' ?<>2='<;' F BEB ;' B; , 2 , ; < 6

' A 0' = 0F , ;?A' ;<' $B ;A B ' < ' BF;B HB ' ' ' 1 ,00B ,' BWF2, 0' ;A , ;' ;AB' =BF<F>2, ; < ' < ' ;AB' = 0; ?;' ' < ;' < ' A :' , =' ;AB' , ?;' ;A , ;' ;AB' =B , R , ' A , =' ; , B ' , 0' ;A <>DA<>;' ;AB' ?<> ; @Y 0 =B:' A , EB' ?< FB22B='A ' ; <' , B' , ' B < <>0' F <E 0 < ' < ' <<=' < ' A 0' , @6' ?B' ;AB' 2, =' A , 0' HBB ' 0UBF;' H, B:' AB' >0;' ?<22B?;' ;BB ' < ' ;UB ;@' = , @08' , ; < 0' < ' ;AB' P;A' , =' ;A' < F06' K' # , ?A' = , @' =B < 0; , ;B0' ;AB' B?B00 ;@' < ' ;A 0' < B' ?2B , 2@:' H>;' B , ?A' = , @' , B0' ;' < B' BE =B ;' ;A , ;' UB' , B' <;' <H; , D' ,0' >?A' ,0' <> ' , ?; E ;@' =B0B EB06' AB' 0 ,22' , <> ;' < ' ; , 0F< ;' , E , 2 , H2B:' , =' ;AB' =B0; >?; < ' H@' ;AB' F, 0A' H D , =0' < '0BEB ,2' ?< E<@0' < ' ?< ' UA ?A' UB B' ?< D' >F' < ' ;AB' F <E ?B' < ' . ,22 , =<2 =:' A , EB' <??, 0 < B=' =B2 , @' ' ;AB' , ??> >2 , ; < ' < ' ;AB' 0;< B06' ' , == ; < ,2' EBW , ; < ' 0' ;A , ;' UA 2B' ;' U , 0' BF< ;B=' ;A , ;' UB' A , =' ? , F ;> B=' : ' , ; < 0' < ' H 0?> ;' ' 2 B = , :' ;AB B' ;> ' <>;' B , 22@' ;<' HB' < 2@' : ' , ; < 06' $>;' ;' U , 0

K' 1 ,00B ,' ;<' & B22 D;< :' BF;6' O:' < ' "< ;' < ?BF? < ' S@ # 2%(' . :' ('% %' %3 ' # % %

^ ' ;AB' @ # 2%(' . :' ('% %' .%3 ' 8 : % %' 0BB' FFB = W' ;<' ;A 0' E<26

OO6 1 #) 8 * .) # $ ' A ' (
;< ;AB 8< ;: , ;" "<R =8 < ?B6 & B22 D;< 8O ?< ?B ; , ; < < ;AB 2E , >0; <HE <>02@ HB ?< F2B;B= HB < B ;AB " B ?A ?<>2= 0; B6
BF;B HB : :) B@ , = C> <; H < B >F < ;AB B ?, F B ;O < < ;< 2 B =, UA 2B B B = BU ??2<0B ;< ;AB , H<=@H@ , ?A D >F < , H>D, 2 ;<U, =O (>, =, 6 ; U, O ??2B, ;A, ; ;AB , ; ; , ? < ;AB " B ?A U, O ;< HB =B2 EB B= , 2< D ;AB 2 B < ;AB 1 < =BD<: H>; UAB;AB H@ ;O 0<>;AB < ;O < ;AB H, & B22 D;< ?<>2= <; @B; HB 0> B: ;A<>DA AB U, O > =B ;AB F B00 < ;A, ; ;AB < B U<>2= HB ;AB ?A<0B <>;B: 0 ?B ;AB # : (('% < 2 B =, H@ B2< ?<, = +< ;B =B 1 > ?B22, O D<<= < , +< ;>D>B0B <, =: UA 2B ;AB <> ; , ; , ? H@ , ?<0< , = . RB> O , H< , H2B6 ! B ; < B < ;AB ;A BB ?<2> O < ;AB " B ?A F< ;B= < ;AB 0; ;<U, =O ;AB < ;A H, 7 UA 2B) B@ ;<< A O U, @ H@ " B W, =, O , = 2EB ?, ; <U, =O B2< ?<: C> <; U, O BF< ;B= ; < A, EB ;> B= < < ;AB , < , = , ; . , 2EB =B: , = ; < HB , ?A D H@ + AB2 UB0;U, = < < ;A UB0;U, =6 _ ' , ; B@ B U<>2= =< , ;B B, ?A D (>, =, B , B= @B; ; < HB 0BB 6
AB ;<; , 2 < ?B UA ?A 1 , 00B , A, = , U ;<DB;AB < ;AB E, 0 < U, O P : < ?B O , = B 6 B A, = 2B ; HBA = , BD B ; < = , D<< O , = <> H, ; ; , 2 < O < , ; @ ; < ; , B ?, B < 2 B =, , = >=, = <= D<6 ;AB 2, ; ;B F2, ?B AB A, = , 20< =BF<0 ;B= A O 0 BDB ; , : U ;A ;AB ?< 0 =B , H2B H<=@ < , ; 22B @ B HB2< D D ; <; 6 $ B B , = , ?, >2; ?< Y , =B= , ; ;AB ; U< F2, ?B0 B0FB?; EB2@6 AB@ A, = HB; UBB ;AB 0< B : B : , < ?B UA ?A FB ?BF; H2@ = 0AB= ;AB , @ < E, 0 < : @B; U, O 0> ? B ; ; <= < B ;A, ; <A<2= ;AB ; U< < ; B00B06 (, =, B: E ;A EB 0M>, = < O < = , D<< 0: U, O ;< , ; , ; <>?A HB; UBB ;AB 6) <; , , ; U<>2= HB , E, 2, H2B < ;AB D, 0< O < 0B E ?B , D, 0; F, 0A < +< ;>D>B0B 0> DB ;0 V =BB= H<; A 2 B =, , = <= D< UB B F , ?; ?, 22@ > =B H2<? , =B < ;AB < B ; ; A, ; ;AB , , @ UB ; < U, =: , = UB B =B0; B= ; < 2B, <; A D < ;0

" < =B; , 20 0BB ; AB , H2B0 ; AB FFB = W6 22 ; AB ; <<F0 2B ; HBA = A, EB HBB D =2@ =B=>?; B=6 AB D> B0 D EB H@ " < : P5: P: , B <; M> ; B BW, ?; : 0BB F << O FFB = W 7 AB , B0 0< B ; <<F0 B ; B +< ;>D, 2 UA ?A UB B 2B ; , O D, 0< 0: , = < ;AB <; AB A, = < ;O UA<2B H, ; ; , 2 < O UA ?A , ?AB= : , O ; AB@ A, = BEB BW 0; B=6

92: 3 ' ' & (; ') * (& 0 ? ' ' A' ;AB ?< ; >, ; < < ;AB B; B, ; < A 0 , @ ;<U, =0 +< ;B =B 1 > ?B22, , =;AB F<0 ; < HBA =;AB 2E, 6 AB 0;: =:, = O;A * E 0 < 0 B; B=, ;;AB 2B 0> B, 2< D;AB D B, ; ? :((%% H@ , ,D , , = A, >0?, G ;AB % DA;; * E 0 < <EB=F, ,22B2 ;< ;AB H@;AB <> ;, <,=(<>EB, , 1, ; A< , < ,<6 AB, FFB, , ?B<) B@8 0?, E, 2 @, ;% A, B0< ;A 0; ,? ,=B ;AB < , =B A B, W <>0 ;<A, EB ; U, ;?AB=:0 ?B ; U, 0 F<00 H2B ;A, ; ;AB P;A < F0 DA;>0B ;6 AB ?, E, 2 @: BBF D ;AB B, UB22 D>, =B=:2, @ ;A 0 =, @ , ; + A, 0 < ;AB # :((%% , = , 1, ; A< < ;AB A 22 <, =6 B, =M>, ;B 0 UB B , ; B, : < ;AB 2, ; ;B 2 B6 AB< 2@; <<F0 <U 2B ; < ;A < ;AB 1 < =BD<: < ;AB <>;B UA ?A C> <; DA; F<00 H2@ <22<U < + AB2: UB B , BU ?, E, 2 @ F ? B;0: UAB B < B;AB < Y , =B A B : ?< ?B E D ; N>0; F<00 H2B ;A, ; ;AB ;A < F0 DA; HB ;B = D ; < , B , =, 0A , ; F< ;<: UA 2B ;AB <;AB ;U< BF; A ?AB? : 0B ; > DB ; 2B;;B 0 ; < , : ;AB < ?B ?A, DB < ;AB 2 ; , <) < ;AB $B , : , = ;< $, ??B22, : UA< 2, @, ; F< ;< U ;A ;AB 2 ; , < ;AB # ; B * <> < B 1 A<: ;< ;, B F B?, >; < 0 , D, 0; ;A 0 <EB B ;6 , ; : < 1 < B ;< =B $B , : U, 0 ;< BB2 < C> <;8 0 < ; , = 2, G $, ??B22, U, 0 ;< 0B = <>; 0< B F ? B= H, ; ;, 2 < 0: > =B C6 & 20< : ;< ;AB 2 B < ;AB . <>D, : , = ;< DB; ;< ;<>?A U ;A , ; < A 0 2B ;6

;AB 4;A 1, 00B , 8 0 ;B ; < 0 , ; 2, 0; HB?, B ?2B, ;< A 0 , =EB 0, @6 AB ?, E, 2 @ < ;AB P;A < F0 ? <00B= ;AB H =DB < " < <0: UA ?A ; A, = 0B RB= < ;AB F BE <>0 DA; : , = ;AB 2B, = D = E 0 < < , ; @ <22<UB= ; ;< C> ?, B0: < ;AB 1 < =BD<H, G <;A D ?, B, 2< D ;AB # :((%% , 22 ;AB " B ?A ?<2> 0 ;> D < ; ; , ; , F ?A , : , = F> 0> D ;AB ? <00Y <, =6) B@8 0 B, U, 0 0; 22 , ; B2< ?<: ;< UA ?A F2, ?B ;AB UA<2B < ;AB = < F0 , 20< ?, B >F ;A, ; =, @6 ;AB BEB D ;AB AB, = < ;AB ?, E, 2 @ < ;AB P;A < F0 U, 0 B, 1, D>, 2=B: , @ 2B0 , 2< D ;AB <, = < ;A < ;AB 1 < =BD<6 ; 0BB B= F <H, H2B ;AB B < B: ;A, ; , ; ; , 0 B B ?B < ;AB UA<2B " B ?A , @ ;< ;AB DA; H, : <EB ;AB H =DB < " < <0: U, 0 , H<>; ; < ; , B F2, ?B6 A 0 HB?, B , 2 <0; ?B ; , UAB ;AB 0 >2; , B<>0 BU0 , EB= ;A, ; C> <; A, = , ?AB= ;A, ; =, @ < + AB2 <; ;<U, =0 B2< ?<: < < ;AB F< ;< <, = I;A, ; H@ 1 , , 2E, , = ;6 C<, < =, +B0M>B , J: H>; H@ ;AB , H< , H2B ? <00 <, = H@ +<E<, =8B2

, ;B ' B2< ?<' , =' (>, =,' A ,=' HBB ' <> =' B F;@' < ' A,H ; , ;0:' ;AB@' A, =2@' HB2 BEB=' ;A , ;' 0>?A' ,' 2, DB' F2,?B' ,0' . RB>:' ,' ;<U ' < '5: ' 0<>20:' U<>2=' HB' =B0B ;B=6

1 ,00B ,80' 0;, B' HB?, B' BE =B ;' ;<' A 0' 0<2= B 0' < ' ;AB' 0;' =,@' < ' UA ?A' AB' < =B B=' A 0' ?<2> 0' ;<' M> ;' ;AB' , > <,=0' , =' ;, B' ;<' ;AB' H@ F, ;A06 AB' , ; @' ?<>2=' 0; 22' DB;' < U, =:' H>;' ;AB' , ; 22B @' , =' U, DD< ; , ' HBD, ' ;<' = ,D' HBA =:' ;<' 2<0B' A< 0B0:' , =' ;<' 0BB' EBA ?2B' ,;B ' EBA ?2B' H < B :' = 0, H2B=:' < ' ,H, =< B=6 ' ;AB' ;A' ;AB' , ; @' < ' ;AB' P;A' < F0' D<;' ,0' , ' ,0' 1, D>, 2=B' < ' ;AB' < ;A' H, ' < ' ;AB' 1 < =BD<:' H>;' ;AB' , ; 22B @' U,0' 0<' >?A' =B2, @B=' ' ;AB' =B 2B' , ;B ' F, 00 D' C> ?, B0' ;A, ;' ;' ?<>2=' <;' ?, ;?A' >F' ;AB' B, ' < ' ;AB' , ?A D' ; <<F0:' , =' A, =' ;<' HB' F, B=' , ;' DA;' <;' , @' 2B0' HB@< =' ;AB' H =DB' < ' "< <06 AB' =' < F0' < ' B, ?A D' ;A 0' 0F<;' <> =' ;AB' <, =' H2<? B=:' , =' H E<>, ? B=' U ;A' < B' = E 0 < ' HB@< =' ;AB' 1 < =BD<:' , =' < B' 0; 22' ' ;AB' B, ' < ' ;AB' H =DB6 $>;' ;AB' ; <>H2B0' < ' ;A 0' ?<2> ' UB B' <;A D' ;<' ;A<0B' < ' ;AB' ;A' < F0' < ' ;AB' 0B ,H2B' <, =' < ' + AB2' ;<' . RB>6 AB' N<> , ,2' < ' ;AB' ?< Y , =, ;' < ' ;AB' , ; 22B @' < ' C> <;80' 0;' = E 0 < 6 <2< B2') <B2:' ,@' HB' M><;B=' ,0' D E D' ,' , ' =B0? F; < ' < ' ;AB' , ?AB0' < ' ;AB' 4';A' , =' ;A' BF;B HB ' G V

K' ;B ' F, 00 D' ;AB' 2 ;;2B' ;<U ' < ' , ?<0<:' U ;A' ;0' H, ;;2B ' B ;B=' U, 22:' , 22' ;AB' ?<> ; @ 0 =B' 0' <> ;, ' , =' <? 6 AB B' 0' <' <, =:' < 2@' ,' 0;< @' , <U' =, DB <>0' ; ,? :' UA ?A' ;AB' , ; 22B @' A, =' , 22' ;AB' F, 0' ' ;AB' U< 2=' ;<' <22<U' U ;A<>;' BB; D' ,?? =B ;06 ;' 0' , 22' 0;BBF' >F0' , =' =<U 06 ' A, =' ;<' , ?A' U ;A' ,' F, ;@' < ' D> B 0' , AB, =' < ' B:' U ;A' F ? 0' , =' ? <UH, 0' ;<' B 2, DB' ;AB' ; ,? 6 0' B, ?A' , ' < 2@' 2<< B=' <>;' < ' ;0B2 :' ;AB' , ; 22B @' 0<< ' D<;' 2B ;' ;<' ;AB' B,2T:' , =' =B0B ;B=' H@' ;AB' , ; @' , =' ?, E, 2 @6 & B' < 2@' , EB=' , ;' <> ' A, 2; D ' F2, ?B0' 2, ;B' , ;' DA;:' >;;B 2@' =< B' >F6 AB' D> 0' UB B' , 2 <0;' , 2U, @0' , H, =< B=' ;<' ;AB 0B2EB07 UB' = =' <;' <U' UA, ;' <, =' ;<' <22<U:' A, E D' <' < B' ;<' D EB' >0' < , ; < ' H>;' ,' BU' , ; @' 0; , DD2B 0:' UA<' A, =' ;AB 0B2EB0' 2<0;' ;AB ' U, @6 ;' << ' < ' ;AB' ;A' ' A, 2;B=' U ;A' @' ;U<' H, ;;B B0' , ;B ' ;U<' A<> 0' < ' ?B00, ;' >FA 22:' ;<' =' @0B2 ' , ;' ;AB' ? B0;' < ' ,' <> ;, :' U ;A' ,' F B? F ;<>0' =B0?B ;' HB < B' B:' , =' HB@< =' ;A, ;' , <;AB ' ,0?B ;' U = D' >FU, =0:' ,0' , ' ,0' ;AB' B@B' ?<>2=' B, ?A6 & B' UB B' 0<' BWA, >0;B=' ;A, ;' ;' U, 0' >0B2B00' ;<' D<

> ;AB ' ;A , ;' =, @:' H>;' < ' ;AB' 5;A:' U ;A' ,' F, ;@' < ' D> B 0' ,2U,@0' U< D' ' < ;' ;<' B 2, DB' ;AB' <,=:' UB' <EB=' <EB ' A 22' , =' E,2B:' ?< F2B;B2@' <>;' < ' ;<>?A' U ;A' ;AB' , @6' ' A,=' ;<' =B' <>;' U ;A' <> ' <> ;B=' B ' ;<' A> ;' < ' , @' ; ,?B' < ' ;6' ;' 2,0;:' ' ,' =B0B ;B=' E 22,DB:' UB' <> =' , ' <2=' FB,0, ;' UA<' F< ;B=' <>;' ;AB' <,=' ;<' . RB>6' $>;' ;' U,0' < 2@' < ' ;AB' ;A' ;A,;' UB' D<;' ;AB B68') <B280' H,;;B B0:' ;' ,@' HB' B , B=:' UB B' <E D' ,22' ;AB' ; B' HB;UBB ' ;AB' , ; @:' UA ?A' U,0' ,AB,=:' , =' ;AB' (, =' +, ' UA ?A' U,0' HBA =' ;AB :' U ;A' 1< ;H > 80' ?,E,2 @' H D D' >F' ;AB' B, 6' ! B;' ;AB@' UB B' ,H0<2>;B2@' 2<0;' , =' A,=' ;<' 0A ;' < ' ;AB 0B2EB0' U ;A<>;' < =B 0' < ' B0?< ;'

AB' +, ' , B=' BEB ' U< 0B7' UAB ' B, D' <;<N,2:' < ' ;AB' ;A:' ;' U,0' > BWFB?;B=2@' HB0B;' H@' <2< B2' , ;:' UA<' A,=' ?< B' =<U ' < ' 1< B ;,' U ;A' ,' H D,=B' < ' A 0' 2 ; ,' , =' ;U<' 0M>,= < 0' < ' +< ;>D>B0B' BD>2, ' ?,E,2 @6' AB' +, ' U,0' B0?< ;B=' H@' < B' ?< F, @' < ' D B ,= B 0:' UA<' , ?AB=' ,;' ;0' AB,=:' , =' ,' H,;;,2 < ' < ' ;AB' 0A' %BD < :' UA<' UB B' , ' ;<' ;AB' B, :' UA 2B' 1< ;H > 80' B 0B' ?,E,2 @' ?<2> ' U,0' M> ;B' <>;' < ' 0 DA;6' , ;' A,=' ,' D B,;' <FF< ;> ;@:' < ' ;AB' 2< D' 2B' < 'EBA ??B0' , =' D> 0:' ?,>DA;' ' ,' , 8<U' <,=:' U,0' f= <0;' AB2F2B006' $>;' AB' , 2B=' ;<' =<' ,22' ;A,;' U,0' ' A 0' F<UB 7 A 0' ?,E,2 @' ?A, DB=' ;AB' ?< F, @' ,;' ;AB' AB,=' < ' ;AB' ?<2> ' , =' U,0' BF>20B=6' B' ;AB ' 2B=' A 0' H,;;,2 < 0' ,2< D' ;AB' A 220 =B:' <FB B=' B' < ' ;AB' A< 0B0' , =' B ' < ' ;AB' ; , :' , =:' =B0?B = D' ;<' ;AB ' =0;:' ?,F; B=' , =' =B0; <@B=' 0< B' ?, 00< 0' , =' ;<< ' 0< B' B DA;@' F 0< B 06' $>;' UAB ' ;AB' B0?< ; H,;;,2 < ' ?, B' A> @ D' >F' < ' ;AB' B, :' A 0' 2BE B0' UB B' 0; ? B ' U ;A' F, ?' , =' A,0; 2@' B; B=:' ;A<>DA' ;AB@' UB B' 0; < D' B <>DA' ;<' A,EB' AB2=' < ' ;AB' EB' A> = B=' 0A:' , =' ;<' A,EB' 0 ,0AB=' < ' <22B=' <EB ' ;AB' F B? F ?B0' ;AB' D B,;B ' F, ;' < ' ;AB' D> 0' , =' U,DD< 06' 1< ;H > 80' ?,E,2 @' = =' <;' DB;' >F' ; 22' ,22' U,0' <EB :' , =' U<>2=' A,EB' HBB ' FB B?;2@' >0B2B00' < ' ;AB' F B? F ;<>0' <,=:' BEB ' ' ;AB@' A,=' , EB=' B, 2 B 6' ' , ;80' < ,@' A,=' HBB ' F <FB 2@' ?, B=' <>;:' 1,00B ,' DA;' A,EB' 2<0;' A 0' B0B EB' , ; 22B @' , =' <0;' < ' A 0' F <E 0< 0 V ,' = 0,0;B ' UA ?A' DA;' A,EB' < ?B=' A ' ;<' ;> ' H,? ' ;<' 2 B =,6' B' =B0B EB=' 0>?A' ,' F> 0A B ;' < ' A,E D' , ?AB=' A 0' ,22 F< ;, ;'

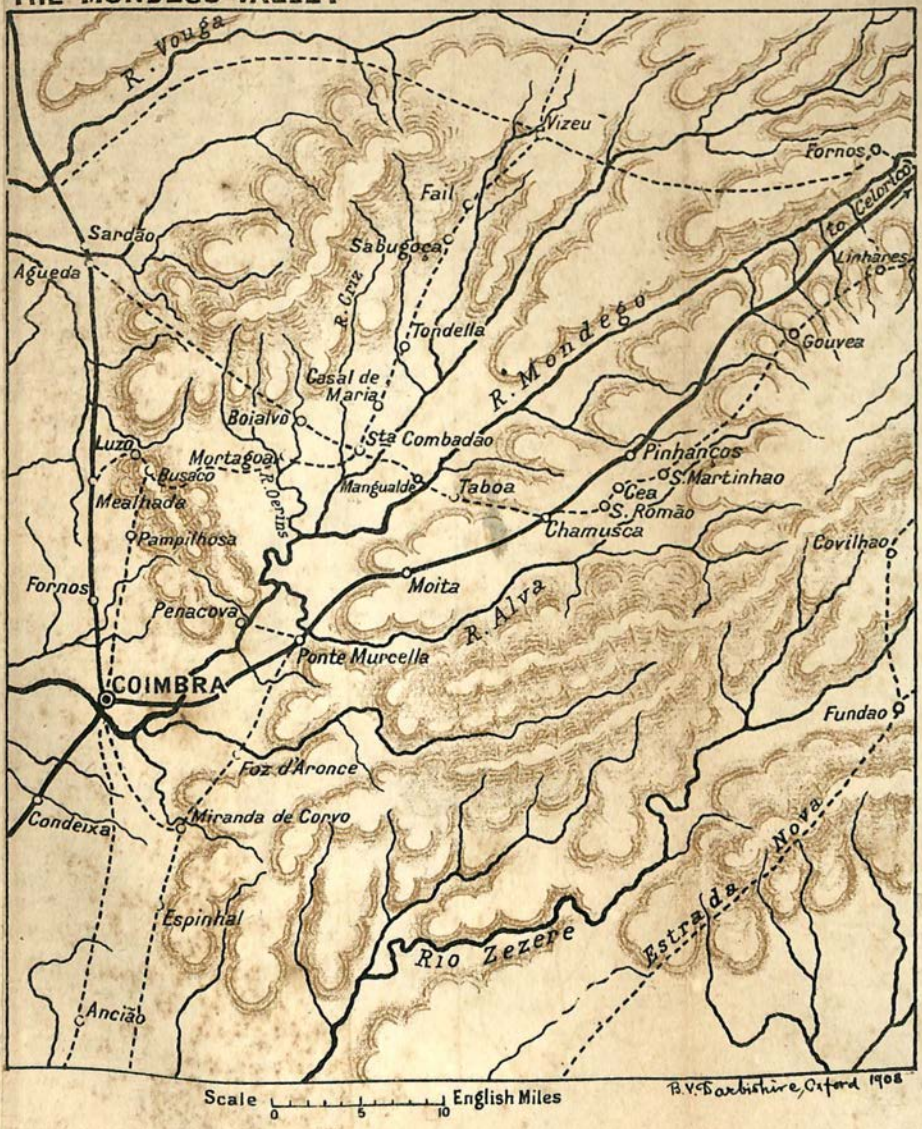
= = L') ' + # ' #' ( ) * ' + 9 '

; , ' < ' ;AB' BW; B B' 2, ' < ' A 0' , @:' U ;A' , ' 0> ? B ;' B0?< ;

A<>DA' C> <;80' , ; @' = E 0 < 0' B, ?AB=' ;AB' =B0B ;B=' U, 220' < ' . RB>' < ' BF;6' 5;A' , =' ;AB B' B;' ;AB' ?< F0' < ') B@:' ;AB' = E 0 < ,2' , T; 22B @' = =' <;' , EB' ; 22' BW;' =, @:' UA 2B' ;AB' B0B EB' , ; 22B @:' ;AB' ; , 0' , =' ;AB' AB, E@' ?, E, 2 @' UB B' 0; >DD2 D' ' >F< ' ;AB' 0;' , =' =' H@' =B; , ?A B ;06' "< ' 1 < ;H > ' A, =' A, 2; B=' ;AB' D B, ;' ?< E<@' , ;B ' , ;80' , ; ; , ? :' , =' F, B=' ;:' B, D' ;A, ;' ;AB' +< ;>D>B0B' DA;' ?< B' H, ? ' ' D B, ;B ' > HB 0' , =' D EB' < B' ; <>H2B6' & AB ' AB' 0; , ;B=' ;' ,D, :' < ' ;AB' 0;:' AB' ;<< ' ?, B' ;<' D EB' ;' HB; ;B ' , ?A D' , , DBY B ;0:' , =' ;<' , ; ; , ?A' ?, E, 2 @' B0?< ;0' ;<' B, ?A' 0B?; < 6' $>;' ;A 0' ?, >0B=' >?A' =B2, @:' , =' B, UA 2B' ;AB' ;A' < F0' U, ;B=' , ;' . RB>' K' , D' ; B' 8' , =' > , H2B' ;<' <EB6' #EB ' ;AB' P;A' < F0' B , B=' ;AB B' ;U<' =, @0:' U, ; D' UA 2B' ;0' D> ?, , DB0' , =' ?, < 0' UB B' HB D' BF, B=7' < ' ;AB' "< ><0 . RB>' <, =:' ;A<>DA' ;B2@' 2B00' <>DA' ;A, ' ;A, ;' UA ?A' ;AB' ;A' < F0' , =' ;AB' F, ' A, =' <22<UB=:' U, 0' 0; 22' H, =' B <>DA' ;<' 0A, B' , @' EBA ??B0' ;<' F B?B06' AB' ;B =, ; (B B ,2' BF< ;B=' ;A, ;' B;BB ' ?, 00< 0' ?, @ D' :5 ' , ; < 0' < ' H 0?> ;' HB2< D D' ;<' ;AB' P;A' < F0' H < B' =<U ' , =' A, =' ;<' HB' H> ;7' ;AB' <<=' U, 0' = 0; Y H>; B=' , < D' ;AB' BD B ;0' , 0' ;AB@' F, 00B=:' U ;A' >?A' ?< 0BM>B ;' U, 0; B' ' 22' ;A, ;') B@' ?<>2=' =<' HB; UBB ' ;AB' ;A' < ' BF; B HB :' EAB ' AB' B, ?AB=' . RB>:' , =' ;AB' 0;:' U, 0' ;<' F>0A' < U, =' , ' , =E, ?B=' D>, =' ;<' < =< ' , :' ;BB ' 2B0' =<U ' ;AB' . RB> ' < H ,' <, =:' U ;A' , ' , ; @' = E 0 < ' ' 0>FF< ;' , ;' " , 26' 1B, UA 2B' ;AB' =' < F0:' <22<U D' ' ;AB' U, B' < ' ;AB' P; A:' A, =' , 20< , =B' ;0' U, @' ;<' . RB>6' AB' H>2 ' < ' B@ B 80' < ?B' ;<< ' ;AB' "< <0 1 , D>, 2=B %, D <0, ' <>; B:' , 0') B@80' A, =' =< B6' $>;' , ' , =E, ?B=' D>, =' < ' , 22' , 0' =B0?B =B=' ;AB' D B, ;' # :((% 0<>; A' < ' ;AB' EB ' , 0' , ' , 0' , H<, :' = E D' ' ;AB' F ? B; 0' < ' ;AB' # D2 0A' ?, E, 2 @:' , =' ;AB ' ? <00B=' ;AB' 1 < =BD<' , ;' ;AB' H =DB' < ' , H<, :' , =' B22' ;<' ;AB' B, ' < ' ;AB' B0;' < ' ;AB' ?< F0' HB@< =' 1 , D>, 2=B6' A 0' , FF, B ;2@' U, 0' ;B =B=' ;<' BBF' & B22 D;< ' > ?B ; , :' , 0' 2< D' , 0' F<00 H2B:' , 0' ;<' UAB; AB ' F, ;

T ' 2 EB2@' , ??<> ;' < ' ;A 0' , , ' , @' HB' <> =' ' 1 , H<;:' 6' S ' 7' =B; , 20' , @' <;' HB' , 22' ; >0; U< ;A@:' H>;' ;AB' DB B , 2' , , ; EB' , D BB0' U ;A' , ?; 80' BF< ;:' F ;B=' ' < , <' =, ' %>R:' E<26' E :' FFB = W6

' BF< ;' < ' %, HB ;:' ;B =, ; (B B , 2:' =, ; B=' . RB>:' BF; 6' 6


THE MONDEGO VALLEY
R. Vouga
Vizeu
Fornos
Fail
to Celorico
Sardão
Sabugosa
Linhares
Agueda
R. Criz
R. Mondego
Tondella
Gouvea
Casal de Maria
Boialvo
Sta Combadão
Pinhancos
Luzo
Mortagoa
R. Dorins
S. Martinhao
Busaco
Mangualde
Taboa
Cea
Mealhada
S. Romão
Chamusca
Pampilhosa
Covilhao
Fornos
Moita
R. Alva
Penacova
Ponte Murcella
COIMBRA
Fundao
Foz d'Aronce
Condeixa
Miranda de Corvo
Estrada Nova
Espinhal
Rio Zezere
Ancião
Scale
0
5
10
English Miles
B.V.C. Barbistire, Oxford 1908

;AB 0B2EB0: UA 2B ' B0> B @ , ?A < ' < H 8, : UAB B I, 0 ' , ' < B=J ' 0A, 22 = ;AB D2< +< ;>D>B0B ?< ?B ; , ;B=6 : , 22 <> ' , ?AB0 , B , ? <00 , =B0B ;7 <; , 0<>2 ;< HB 0BB ' , @UAB B7 BEB @;A D 0 , H, =< B=6 AB # D2 0A F>0A ;AB ' H, H, ;@ ;< ;AB F< ; < ' 0A<<; D ;AB U B;?AB= A, H ; , ; UA< ; B0 ;< B , ' A 0 E 22, DB7 ;AB U< B : ;AB ?A 2= B : ;AB , DB=: A, EB , 22 =B?, FB=6 & B ?, <; = , D> =B , [EAB B6 AB 0<2= B 0 = 0?<EB ' , BU F<; , ;<B0 , = <;AB ' EBDB; , H2B07 ;AB@ , B 0, ; 0 B=: , = H> ' < ' ;AB < B ; UAB ' ;AB@ 0A, 22 BB; ;AB B B @68 AB F2, ' < ' =BE, 0; , ; < ' U, 0 , 2 B, =@ HBD D ;< U< '7 1, 00B , A, = BWA, >0; B= 0BEB ' < ' ;AB ;A ;BB ' =, @08 F <Y E 0 < 0 UA ?A A 0 , @ ?, B=: , = ; U, 0 <; U ;A ; AB F<; , ;<B0 D2B, B= ' ;AB B2=0 < ' . RB>: < ' ;AB FB D , FB0 < ' ; 0 E B@, =0: ;A, ; AB ?<>2= B 22 ;AB B F;@ 0;< B U, DD< 06 B >0; F>0A < ' < ' < H , ' , 0 , 0; , 0 F<00 H2B 7 ;A 0: < =<>H; : U, 0 UA@ AB , =B >F A 0 = ;< , ?A < ' ;A, ; F2, ?B: <; H@ =B0?B = D < ' . RB> ;< EB < , = B ;B D ;AB ?<, 0; F2, : H>; H@ ; , D ;AB = B?; <, = H@ , ; , < H, * , <: 1 < ; , D<, : , = $>00, ?<6 #EB ' %<FBR8 0 , >2; @ , F 0A<U0 ;AB =DB < ' $>00, ?< , 0 , 0B <>0 FA@0 ?, 2 B, ;> B: H>; ;AB 1 , 0A, 2 =<B0 <; 0BB ' ;< A, EB B 2B?; B= < ' , < B ; ;A, ; & B22 D;< ' DA; ?A<<0B ;< =B B = ;6 AB < =B 0 = , U ' >F < ' BF; B HB ' O; A < ' ;AB , ?A < ' < H , F B0>FF<0B , ' > <H0; >?; B= F <D B00 , E D B; < , ?; EB B0 0; , ?B , 0 @B; < ' ;AB D2< ' +< ;>D>B0B , @: 1, 00B , U < D2@ ;<< ' ; < ' D , ;B= ;A, ; AB DA; ?<> ; < ' ;AB F <2< D, ; < ' < ' ;A 0 D<<= < ;> B6

$B < B <E D < ' < ' . RB> ;AB < D, R, ; < ' < ' ;AB " B ?A , @ U, 0 02 DA; 2@ <= B=6 C> <;8 0 ?< FO ?< ; , B= , ' > HB ' < ' <> ;A H, ; ; , 2 < 0: HB2< D D ;< BD B ; 0 UA<0B ;A BB 0B < ' H, ; ; , 2 < 0 UB B 0B E D ' ;AB = < F06 AB ; U< ?< FO A, = BEB ' B; ; 22 H<; A 2, @ , ; . RB>6 1, 00B , ;AB ' < =B B= ;AB <> ;A H, ; ; , 2 < 0 < ' ;AB P; A: O4; A: 4 ;A < ' ;AB % B: , = ;AB = , = O; A %BDB ' ; < N< ' ;AB ' BD B ; 0 ' B@ B 8 0 ?< FO7 ;A 0 B=>?B= ;AB ;A < FO H@ : ' B '7 ' B; > : A<UBEB : B@ B ' U, 0 < =B B= ;< , B <EB ' ; < C> <; ; U< BD B ; 0 < ' <2= ; <<FO: ;AB P; A , = P; A < ' ;AB 2 B IB, ?A < ' ;A BB H, ; ; , 2 < 0J

' BB ;AB < =B 0 ' ;AB @ # 2%(' . : ' (' %' .%' 3 ' 8 : % %'

)/' 000')'

45;Aʻ BU2@ʻ 2, =B=6ʻ 6ʻ , FHB228Oʻ , =ʻ <2B , 8Oʻ +< ;>D>B0Bʻ ,20<ʻ <EB=ʻ ;<ʻ ;ABʻ 0, Bʻ F< ;6ʻ ABʻ =ʻ , =ʻ O;Aʻ * E 0 < 0ʻ B , B=ʻ ,ʻ; +< ;Bʻ =Bʻ 1 ?B22,ʻ ʻ ;ABʻ B ; B ?AB=ʻ F<0 ; < :ʻ U;Aʻ;ABʻ % DA;ʻ * E 0 < ʻ , =ʻ + ,? 8Oʻ +< ;>D>B0Bʻ ʻ < ;ʻ< ʻ;AB ʻ ,;ʻ . B =,ʻ=<ʻ +< ?<ʻ , =ʻ , F,@<6

$>;ʻ< ʻ ;ABʻ ;Aʻ:ʻ UAB ʻ) B@8Oʻ ,=E, ?B=ʻ D>, =ʻ HBD, ʻ;<ʻ ?< Bʻ <>;ʻ < ʻ . RB>ʻ < ʻ ;ABʻ , ;,ʻ < H,ʻ * ,<ʻ <,=:ʻ <;ʻ< ʻ ;ABʻ EB <ʻ <,=:ʻ & B22 D;< ʻ = 0?<EB B=ʻ ;A,;ʻ ;ʻ U,Oʻ < ʻ ;ABʻ <> ;, ʻ < ʻ $>00,?<:ʻ , =ʻ <;ʻ< ʻ ;ABʻ F2, ʻ ʻ < ;ʻ < ʻ < H ,:ʻ ;A,;ʻ ABʻ U<>2=ʻ BW;ʻ BB;ʻ ;ABʻ B B @6ʻ ??< = D2@ʻ +,? 8Oʻ +< ;>D>B0Bʻ , =ʻ ;ABʻ % DA;ʻ * E 0 < ʻ < =B=ʻ ;ABʻ 1 < =BD<ʻ HB2<Uʻ , F,@<:ʻ ,Oʻ = =ʻ ;ABʻ 2 DA;ʻ ?,E,2 @:ʻ , =ʻ ,ʻ =B;, Dʻ < ?Bʻ U,Oʻ ;A>Oʻ ;A <U ʻ ,? <00ʻ ;ABʻ . RB> < H ,ʻ <,=6ʻ ABʻ +< ;>D>B0Bʻ H D,=Bʻ ;<< ʻ F<0;ʻ HBA =ʻ ;ABʻ Rʻ ;< B ;:ʻ ,> > =8Oʻ B ʻ ,ʻ2 ;;2Bʻ ;<ʻ ;ABʻ B, ʻ ,;ʻ 1 < ;,D<,6ʻ ;ʻ ;ABʻ 0, Bʻ ; Bʻ ;ABʻ 0;ʻ * E 0 < ʻ , =ʻ ;ABʻ ; <<FOʻ ,;;,?AB=ʻ ;<ʻ ;ʻ <EB=ʻ <>;ʻ < ʻ < H ,ʻ ;<ʻ 1B,2A,=,ʻ < ʻ ;ABʻ EB <ʻ <,=:ʻ ,ʻ F< ;ʻ < ʻ UA ?Aʻ ;AB@ʻ ?<>2=ʻ B,0 2@ʻ HBʻ ?,22B=ʻ >Fʻ ;<ʻ ;ABʻ $>00,?<ʻ F<0 ; < :ʻ ʻ <ʻ " B ?Aʻ ?<2> Oʻ UB Bʻ = 0?<EB B=ʻ?< Dʻ=<U ʻ;ABʻ EB <ʻ <,=:ʻ,Oʻ <Uʻ0BB B=ʻF <H,H2B6ʻ A Oʻ =,@:ʻ %B ;A8Oʻ = E 0 < :ʻ;<ʻ & B22 D;< 8Oʻ ;B 0Bʻ 0,; 0 ,?; < :ʻ , EB=ʻ ,;ʻ , ʻ 1 D>B2ʻ =Bʻ +,@, B0ʻ HBA =ʻ;ABʻ 2E,:ʻ , =ʻ0<ℕ< B=ʻ ;ABʻ , ʻH<=@6ʻ 22ʻU,Oʻ BF< ;B=ʻ;<ʻHBʻ,ʻ=,@8Oʻ , ?Aʻ< 2@ʻ;<ʻ;ABʻ B, :ʻ,;ʻ "<Rʻ=8 < ?B6ʻ A>Oʻ;ABʻ UA<2Bʻ< ʻ;ABʻ D2< +< ;>D>B0Bʻ BD>2, ʻ < ?BOʻ HB;UBB ʻ * <> <ʻ , =ʻ ,D>Oʻ UB Bʻ B,;2@ʻ ?< ?B Y ; ,;B=6ʻ ;ʻ;ABʻ 0, Bʻ ; Bʻ , ;ʻ U,Oʻ ;<2=ʻ ;<ʻ H Dʻ;ABʻ 2 ; ,ʻ < ʻ) < ;AB ʻ $B ,ʻ =<U ʻ ;ABʻ F< ;< < H ,ʻ <,=ʻ;<ʻ D>B=,ʻ , =ʻ , =,<:ʻ , =ʻ $,??B22,ʻ U,Oʻ = B?;B=ʻ ;<ʻ 0>FF< ;ʻ A ʻ U ;Aʻ & 20< 8Oʻ 2 ; ,ʻ H D,=B:ʻ ʻ ?,0Bʻ 1,00B ,ʻ 0A<>2=ʻ A,EBʻ 0< Bʻ 0>H0 = , @ʻ <FB ,; < :ʻ ,D, 0;ʻ F< ;<ʻ ʻ A Oʻ =6

ʻ;ABʻ O;Aʻ;ABʻ ,;ʻ0 0Aʻ< ʻ;ABʻ?, F, D ʻ;<< ʻF2,?B7ʻ;ABʻ =ʻ < F0:ʻ,=E, ? Dʻ ;<ʻ;ABʻF2, ʻ ʻ < ;ʻ< ʻ 1 < ;,D<,:ʻ <> =ʻ +,? 8Oʻ +< ;>D>B0Bʻ ,? Dʻ ;AB ʻ < ʻ ;ABʻ DA;:ʻ , =ʻ ,> > =8Oʻ = E 0 < ʻ < ʻ ;ABʻ 2B ;:ʻ U ;Aʻ ,ʻ 0? BB ʻ < ʻ ?,E,2 @ʻ ʻ < ;6ʻ AB@ʻ F>0AB=ʻ ʻ ;ABʻ A< 0B B ʻ >F< ʻ ;ABʻ , ; @:ʻ H>;ʻ A,2;B=ʻ UAB ʻ , ; 22B @ʻ <FB B=ʻ >F< ʻ ;AB :ʻ , =ʻ ,=Bʻ <ʻ > ;AB ʻ ,=E, ?B6ʻ ʻ ;A Oʻ =,@ʻ;ABʻHB2,;B=ʻ ;Aʻ < F0:ʻU ;Aʻ ;ABʻ B0B EBʻ?,E,2 @:ʻ ,;ʻ2,0;ʻ 0;, ;B=ʻ < ʻ . RB>6ʻ) BW;ʻ < Dʻ B@ B ʻ F B00B=ʻ< ʻ ʻ < ?Bʻ U ;Aʻ;U< AB,E@ʻ?<2> Oʻ B,?Aʻ < B=ʻH@ʻ,ʻ= E 0 < :ʻ, =ʻ ,> > =ʻ U,Oʻ < =B B=ʻ H@ʻ & B22 D;< ʻ ;<ʻ B; B:ʻ UA ?Aʻ ABʻ = =ʻ U ;Aʻ 0< B

% & " O O N % ! $

$ %# " $ '

> B , 0 ;A , ; UB 0A<>2= =B0? HB ;AB D < = UA ?A & B22 D;< A , = ?A<0B < ;AB 0;: , = < UA ?A AB <>DA; U ;A 0>?A 0F2B = = 0>??B00 >F< ;AB 4;A6 AB =DB UA ?A ; , B0 ;0 , B < ;AB ?< EB ; < $>00 , ?< 0 < B < ;AB HB0; , B= F<0 ; < 0 ;AB UA<2B HB , +B 0>2 , 6 0 D2B ?< ; ><>0 2 B < AB DA;0 ?<EB B= U ;A AB , ;AB , = > RB: U ;A ;AB =>22 B= , = =>22 D B@ D , ;B ? <FF D >F AB B , = ;AB B ;A <>DA ;AB 0< 2: BW;B =0 < ;AB 1 < =BD< < ;AB DA; V UAB B ; B =0 F B? F ;<>02@ V ;< ;AB , ?A , < ;AB B , =B 2?<H , < ;AB 2B ;6 AB =DB 0 EB @ BD>2 , ; 0 , 2; ; >=B7 ;AB ;U< 2< ; B0;0B?; < 0 , B < B , ; , = 0; , ?B < 6 ;U< 2B0 < ;AB 1 < =BD<: , = ;AB <;AB ;< ;AB B= , ;B DA; < ;AB ?< EB ; B ??<0> B: UAB B ;AB < D , 2 <HB2 0 ?< B < , ; D ;AB H , ; ;2B U , 0 0B;>F $B;UBB ;AB0B ;U< ?>2 , ; D 0> ;0 ;AB =DB 0 0 =<U : , = 0 , ; ;0 2<UB0; UAB B ;AB ?<> ; @ <, = < , ; ;< <=B , ; , < ;< + , 2AB <0 F , 00B0 <EB ;6 AB B , B ;A BB <;AB F< ;0 UAB B ; 0 ? <00B= H@ 2 B0 < ?< > ? , ; < 7 ;U< 2 B , ;<;AB B , 0;: <; , < ;AB 1 < =BD<: UAB B H , = F , ;A0 < , + , >2< ;< + , 2 , RB0 , = < , E , 2A , 2 ;< , 0 , 2 BW 0;6 AB ;A = , = <0; F< ; , ; 0 ;0 2B ; ?B ; B: UAB B I??<0B ;< ;AB ?< EB ;J;AB # (%% < B2< ?< ;< < H , : ;AB , , ;B @ < ;AB 2<? , 2 < , = 0@0 ;B : F , 00B0 ;AB U , ;B 0AB=6 ; =<B0 0< , ; , F2 , ?B UA ?A 0 H@ < B , 0 ;AB 2B , 0; 2< ;@ F< ; < ;AB =DB7 H>; ;AB 2 B U , <HE <>0 ;< ;AB <, = , D B D BB : HB? , >0B , 0F> I ;AB < 2@ < B < , @ F< ; , ?B ;AB AB DA;0J AB B > 0 D , =>, 22@ =<U < < ;AB B , ; < ;AB 2<UB D <> =6

AB B , B ;U< < > B ;0 6 ;A 0 0 F2B UB , ;AB HB , ;B <HB2 0 < ;AB ?>2 , ; D AB DA; UAB B ;AB 0; * E 0 < 0; <<=: , F< ; UAB B < DA; D ;<< F2 , ?B: , = ;AB <=B ?<2> 2<UB = < E , = ??<0B ;< ;AB A DAY <, =: HBA = ;AB 0F<; UAB B , > > = <>DA;6 B B ;AB +< ;>D>B0B ;< ;A 0 = , @ , ; , , 0 , 22 2 ; , @ F<0; , = A< 0; , 2 , D ;< =< A< <> ;< ;AB E ?;< @6

P #' $ %#' "' $ ' A' ' C:

<' 2B,=';AB' # :((%%>F';AB' 0=B'<';A0'0F>:'F,0;';AB'E22,DB'<'1<> ,:', ='0<';<';AB'?B0;'<';AB' =DB'<'DB ;2B'02<FB0:'U,0'?2B, 2@'HB;;B';A,';<' , B';?A, DB';AB' , ' , DB:'BEB',;' ,'2B00'2< ;@'F< ;6' AB'?< EB ;'2B0'N>0;';<';AB' DA;'<';AB' 0F<;'UAB B';AB' # :((%%F,00B0';AB'0 @2 B:',' BU'A> =8B='@, =0'<';AB' <,=6' ;'U,0',' 0 F2B:'2<U'M>,=, D2B:'U;A',' 0 ,22' ?A,FB2' ';f]' =0;'0;, = D' ',' B'U<<='<'F B', ='<, :' 0> <> =B='H@',';B <<;'U,226' AB'U<<='0'0F 2B='U;A' AB ;,DB0:'F ?;> B0M>B'2 ;;2B'H> 2= D0'ABU ' ';AB' <? :'UAB B';A<0B'<';AB' < 0'UA<'?A<0B'F ,?; 0B='AB', ?A< ;B80'2 B6' AB' <>;B'U,22'<';AB'U<<=', ='AB';<F0'<';0'; BB0', B'N>0;'E 0 H2B'<';AB'0 @2 B'<';AB' , ' =DB6;AB'?< EB ;'0' <;:'HB D' UB22'=<U';AB' BEB 0B 02<FB6' AB'F< ;'UAB B';AB'?< EB ;'U<<='<F0';AB'AB DA;0'0';AB'< 2@'0B?; <'<';AB 'UAB B'; BB0', B'0BB'<';AB'0> ;6;AB' B0;'<';AB'2 B'0'H, B'AB,;A:'U;A'<??,Y 0<,2'<>;H B, 0'<' <? :',22 D' '02<FB0'<'D B,;B'<'2B00B'0;BBF B00';<U, =0';AB'H<B'U<<=B='<<; A220:'UAB B';AB'" B ?A'2,@6' 'F, ;'<';AB'2B ; ?B ; B';AB B'0'D <> ='UA?A';'0' <BW,DDB ,;<' ;<'=B0? HB',0'F B? F;<>0:';<';AB' <;'<';AB'A DAB0;'F B?B'<';AB' =DB:'HB2<U';AB'<2='<HB2 0 6' AB'B B?;'<';AB'UA<2B'2 B'<'AB DA;0'0' <;'=00 2,';<:';A<>DA'<',' 0 ,22B'0?,2B';A, :';AB'1,2EB ' 2206' AB'A DAB0;'F< ;'<';AB' B ,'0',H<>;' : ' BB;',H<EB'0B,2BEB2V H>;' >?A'2B00:'<'?<> 0B:',H<EB';AB'>F2, ='HB2<U6

AB'F<0 ;<'<'$>00,?<'0'>22@' B' 2B0'2< D'' < 'B =';<'N B =:' <';AB'0;BBF'A 22',H<EB';AB'1< =BD<';<' <2B80'UB0;B' 2, 6;A0'U,0','E,0;' <';<',', @'<'P : ' B';<'?<EB :',??< = D';<';AB'=B,0'<' :' AB B'UB B',H0<2>;B'D,F0' ';AB'2 B',;' <B';A,'<B'F2,?B:'B0FB?,22@',H<EB' ,E,2A<:'UAB B',H<>;',' 2B'0BF,,;B='%B;A80'2B;' <'A0'?B ;,2'H D,=B6' AB'=B B ?B'<'0>?A',F<0;<'?<>2='<2@'HB' 0 B='HB?,>0B'<';U<',?;0G'<B'U,0';A,;'BEB @' <EB B;'<';AB'B B @'<';AB'2<UB'D <> ='HB<B';AB' =DB'?<>2='HB',??> ,;B2@' ,=B'<>;' 8<',H<EB'6 AB'?<>2=' <;'?< ?B ; ,;B' ' < ;'<', @'0B?; <'<';AB AB DA;0'U;A<>;'HB D'0BB 6' 0'< 2@'?A, ?B'<'=< D'0<'U<>2='A,EB'HBB';<';, B',=E, ;,DB'<';AB DA;7'H>;'BEB' 'AB'A,='=,U'>F'<';AB',;;,?'HB<B'=,U V,';A D',2 <0;' F<00 H2B

' &A?A' , B0',0;<> = D'" <80'0;,;B B;';A,;';'U,0'<2@';A BB'M>, ;B 0'<',2B,D>B'2< D'IF6 OPJ6

L + (+ !' "' $ ' P

;' ;AB' H < B :' ,E B ?>;:' U<<=B=' H<;;< 0 V AB' ?<>2=' <;' A,EB'
<EB=' ; 22' >22' =,@2 DA;:' HB?,>0B';AB' ,?B' < ';AB' F<0 ; < ' F B0B ;0'
0<' , @' BD>2, ; B0:' 0>?A' ,0' 0 ,22' D>22 B0' , =' ,;> B'
F B? F ?B0:' ;A,;' ?<2> 0' ?2 H D' ';AB' =, ' >0;' > =<>H;B=2@'
A,EB' D<;' 2<0;' , =' H < B ' >F' < ';AB' U 2=' A 22 0 =B6 1 < B<EB :'
;AB B' U,0' ,' ;A ? ' ?< =< ' < ' $; 0A' F ? B;0' F>0AB=' < U, ='
,2 <0;' ;<' ;AB' <<;' < ';AB' =DB:' UA ?A' U<>2=' A,EB' D EB 'U, D'
H@';AB ' B', =' ;AB 'F B2 , @' B0 0;, ?B:' ', @',=E; ?B' A,='
HBB ',;;B F;B=' ';AB' D B@'=,U 6

AB' 0B?< =',=E, ;,DB' < ';AB' $>00,?<' F<0 ; < ' 0' ;A,;' < ' ;0'
2B ; ?B ; B', =' DA; ?B ; B';AB' =DB' A,0','H <,=' 2,;';<F:' 0< B'
' < ' O ' @, =0',? <00:' < ' UA ?A',22', 0' ?, ' <EB' 2,;B ,22@'
U ;A' B,0B';<' 0>FF< ;', @';A B,;B B=' F< ;6' ;' 0' 0<' H <,=';A,;'
& B22 D;< ' BEB ' EB ;> B=' ;<' H D' >F' ,' BU' 0M>,= < 0' < '
= ,D<< 0';<';AB' 0> ;:' DA;2@', D> D';A,;' ,' ?,E,2 @' ?A, DB'
U<>2=' HB' < ',22' ;A D0';AB' <0;' > BWFB?;B=' =B?BF; < ';A,;' ,'
B B @' UA<' A,=' H B,0;B=' 0>?A' ,' A 220 =B' ?<>2=' BB;',;';AB' B ='
< ' A 0' ?2 H6' 0',' ,;;B ' < ' ,?;:' A<UBEB :';A 0' 0B?; < ' < ';AB'
AB DA;0' U,0' BEB ',;;,? B=' H@' ;AB' " B ?A6' AB' DA;' < '
;AB' F<0 ; < ' 0' <;' 2,; ;<FFB=' 2 B';AB' ?B ; B:' H>;' A,0',' , <U'
0,==2B H,? :' H B, D' ;<' <>;? <F0' < ' <? ' ,;' ;B E,20G' H>;'
;A<>DA' AB B'F < F;' <; < ' < ' DA;';<' 2B ;:' < ' 2B ;' ;<' DA;:' 0'
<;' F<00 H2B' < ';AB' ? B0;:' ;AB B' 0',' <>DA' ?<> ; @ F,;A:' D<<='
< ' , ; @', =',E, 2,H2B' BEB ' < ' D> 0:',' BU' A> = B=' @, =0'
=<U ';AB' BEB 0B' 0 =B' < ';AB' 02<FB6' 2< D';A 0' ; <<F0' ?<>2='
HB' <EB=' U ;A' B,0B:' B ; B2@' <>;' < ' 0 _A;' < ';AB' B B @6 ;' V
F <EB=' >0B >2' < '%B ;A80' = E 0 < ' => D';AB' H,;;2B6 & B22 D;< '
?,2?>2,;B=:' ;AB B < B:' U ;A' FB B?;' ?< B?; B00:' ;A,;' AB' ?<>2='
?<> ;' < ' DB;; D', ',=BM>,;B' < ?B' < '=B B =B 0';<', @' F< ; < '
< ' A 0' 2< D' 2 B' HB < B';AB' B B @' ?<>2=' B0;,H2 0A' A 0B2 ' < ';AB'
0> ;6' AB' BW; B B' 2B ;:' UAB B' <2B80' = E 0 < ' 2,@:' U,0';AB'
A, =B0;' F, ;' < ' A 0' 2 B' ;<' B < ?B:' < ' U, ;' < ' D<<=' 2,;B ,2'
?< > ?,; < 'G ;' U,0',20<',' D<<=' =B,2' 2<UB ';A, ' ,> > =80'
F<0;7 AB B:';AB B < B:' & B22 D;< ' A,=' F2,?B=';AB' , ' ,00' < '
A 0' B0B EB07';AB' (B , '%BD < :', =';\E< +< ;>D>B0B' H D,=B0'
UB B' 2@ D' < ' A 0' 2B ; ?B ; B' EB @' ??2<0B';<' ;AB' O;A' * E 0 < :' 0<'
;A,;' ;AB@' U<>2=' HB' ,E, 2,H2B' ,;' 0A< ;' <; ?B:';A<>DA';AB@' U<>2='
A,EB',' 0; '?2 H' ';AB' " B ?A' ?A<0B';A,;' 0B?; < ' < ';AB' F<0 ; < '
,0';AB ' <HNB?; EB:' , =' ;' A,=';<' HB' 0; B D;AB B=' ' A,0;B6

PO # $ %# " $ ' A ' (
, 0 ,22 U = 22 ;AB < ;6 AB <, = HB D ?>; ;A <>DA
;AB A 220 =B AB B: ;AB@ UB B 0? BB B= ,0 ;AB@ 0;<<=: H>; A, = < 2@
;< , =E, ?B , BU BB; ;< B, ?A ;AB 0 @2 B: , = ;< ?< , = ;AB
02<FB 0; B;?A D >FU, =0 < ;AB E 22, DB < >2,6
< ;AB 2B ; B, < ,> > =80 F<0 ; < : , = < D ;AB
< ;A UB0;B 0B?; < < ;AB # D2 0A 2 B 2, @ <2B80 O;A
* E 0 < : B, ?A D ,2 <0; ;< ;AB E 22, DB0 < + , , = ,0 , =
2DB R6 ;0 +< ;>D>B0B H D, = B I ;A , = = BD B ;0J
U,0 ;A <U < U, = < ;AB 2B ; > =B <22 0: ;0 ;U< # D2 0A
H D, = B0 UB B , ; ;AB AB, = < ;AB 02<FB6 AB D <> = U,0
<; A DA: H>; ;AB 02<FB U,0 EB @ 0;BBF: , = ,0 , , ;;B < ,?;
U,0 BEB BEB ;A B, ;B B=: >?A 2B00 , ;; ,? B=6
W;@ D> 0 UB B = 0; H>;B= ,2< D ;AB 2 B < ;AB B ,6
<00800 A< 0B , ; 22B @ ; <<F UB B U ;A , > > =: $>2280 U ;A
<2B 7 < ;AB B2= H, ;;B B0 %, U0< 80 U,0 U ;A + , ? : A< F0< 80
U ;A % DA;H> B: B;;HB D80 X96 (6%6S U ;A FB ?B : 2BBEB0
X96 (6%6S U ;A <2B , 6 AB B UB B ,20< <> +< ;>D>B0B B2=
H, ;;B B0 7 B ;0?A 2=;80 U,0 < ;AB A DA <, = U ;A + ?;< :
* ? 0< 80 ;U< H, ;;B B0 U ;A 22: + ,00<080 U ;A <2B , : ,2< DY
0 = B < 2BBEB0 (B , D> 06 <> ; D ;AB , ; 22B @ B : , =
;AB ;U< 0M>, = < 0 < ;AB O;A * , D<< 0 < ;AB 0> ; < ;AB
F2, ;B, >: & B22 D;< A, = : B < ;AB B2=6 ;AB B0;
< A 0 = 0F<0, H2B , @: ;AB +< ;>D>B0B ?, E, 2 @ H D, = B I BD Y
B ;0 : O: 4: 7 :O 0, H B0 > =B " , BJ , = < B $; 0A
BD B ; I ;A % DA; * , D<< 0J UB B HB@< = ;AB 1 < =BD<: ,
;< ;AB 0<>;A B, 0; U, ;?A D ;AB <FB ?<> ; @ , ? <00 ;AB 2E, , 0
, , 0 "<R * , < , = <H , 26 AB AB, = M>, ;B 0 UB B , ; "<R =B
2E, 6 < =B B = ;AB +< ;B =B 1 > ?B22, F<0 ; < ,D, 0; , @
FF00 H2B 2, D < ?B ;AB " B ?A DA; A, EB =B; , ?AB=:
& B22 D;< A, = 2B ; %B < 80 +< ;>D>B0B: ;U< BD>2, BD Y
B ;0 I) <06 , = J , = ;A BB H, ;; , 2 < 0 < ;AB $B ,
2 ; , 6 22 ;AB0B ; <<F0 UB B ;B < ;UB2EB 2B0 < ;AB
B, B0; F< ; , ; UA ?A , 0A<; U,0 B=: , = B B ; E, 22B@: , =
UB B , 2 B > 0BB D , = > 0BB 6 , 0 2, , 0A < : , <>;
;< ;AB UB0; < ;AB <;AB 0 = B < ;AB U, ;B 0AB=: ;AB 2<U D <> =
H@ 1 B, 2A, =, : U,0 ;AB # D2 0A ?, E, 2 @: U ;A ;AB BW?BF; < < ;AB
< B BD B ; , ; "<R =B 2E, , = ;U< 0M>, = < 0 < ;AB < EB ;
=DB6
B@ B 80 ?< F0: F>0A D ;AB # D2 0A 8B, D>, = HB < B ;6

L) # ! 8 ' #))) # P

A , =' , EB=' ' < ;' < ' ;AB' $>00 , ?<' F<0 ; < ' < ' ;AB' , ;B << ' < ' BF;B HB ' ;A6' & AB ' 9B@8Ø ?< FØ' ? , B' >F' , ;' =>0 ' B@ B ' B=DB=' , U , @' ;<' ;AB' 2B ;:' , =' B0; , H2 0AB=' A 0B2 ' < ' ;AB' 2<U' A 22Ø' , H<EB' ;AB' A , 2B;' < ' , ' ;< <' =B' , ; , <:' 2B , E D' ;AB' D <> =' , H<>;' ;AB' A DA <, =' ;<' ;AB' P ;A' < F06' AB' ;A' , =' 1 < ;H > 8Ø' ? , E , 2 @' UB B' 0; 22' 0< B' U , @' HBA =:' HB@< =' $, 26' 1 , 00 , :' < ' B , 0< Ø' UA ?A' ;' Ø' A , =' ;<' = E B:' A , =' <;' ?< B' ;<' ;AB' < ;:' ;A<>DA' AB' >0;' A , EB' AB , =' ;AB' D> Ø' D' , 22' ;A <>DA' ;AB' , ;B Y << :' , =' A , =' HBB ' < B=' H@' B@ B ' ;A , ;' ;AB' # D2 0A' UB B' 0; , = D' , ;' H , @' < ' ;AB' $>00 , ?<' =DB6' B' ?, B' <' > ;AB ' ;<' ;AB' < ;' ;A , ' 1 < ; , D<, ' < ' ;AB' ;A6' 9B@' < ' ;AB' < ' < ' ;AB' BW;' =, @' U, Ø' H>0@' B?< < ; D' ;AB' F<0 ; < 7' AB' 0B ;' < U , =' ' 33% : (' ;<' F>0A' ' , > > =8Ø <>;F<0;0:' , =' EB ;> B=' , Ø' , ' ;<' ;AB' < ;' , Ø' U, Ø' F<00 H2B6' <' UB22' A ==B ' U, Ø' & B22 D;< 8Ø' 2 B' ;A , ;' ;AB' 1 , 0A , 2' < B=' , ' B ; B2@' B < B<>Ø' ?< ?BF; < ' < ' UA , ;' U, Ø' HB < B' A 6' ;' 6 ' ' ;AB' < D' AB' U <;B ;<' B@ B ' ;<' 0 , @' ;A , ;' ;AB' UA<2B' # D2 0A' , @' 0BB B=' ;<' HB' <E D' ;<' ;Ø' 2B ;:' , FF , B ;2@' < ' ;AB' <, =' ;<U , =Ø' F< ;<:' H>;' ;A , ;' ;' A , =' 0; 22' , ' B , D>, =:' U ;A' , ' =<RB ' D> 0:' ' F<0 Y ; < ' ;<' ;AB' DA;' < ' ;AB' F , ' UA ?A' ?<EB Ø' ;AB' ?< EB ;6' FF , B ;2@' <2B8Ø = E 0 < :' ; , D' D <> =' ;<' ;Ø' 2B ;' < ' FB ?B 8Ø' , E , 2:' , =' , > > =' < ' ;AB' # %% U, Ø' , 22' ;A , ;' AB' A , =' , =B' <>;6' B' A , =' <;' = 0?<EB B=' %B ;A' , =' ;AB' ;A' * E 0 < :' , =' ?<>2=' <;:' < ' ?<> 0B:' <U' ;A , ;' FB ?B ' U, Ø' , ;' ;A Ø' < B ;' , E D' , ;' ;AB' ?< EB ;:' , =' ;A , ;' 22' U, Ø' , ? <00' ;AB' 1 < =BD<' , ;' +B , ' <E , 6

AB' 1 , 0A , 2' , ==B=' ;A , ;' ' AB' A , =' HBB ' ' ?A B ' ?< , =' AB' 0A<>2=' A , EB' , ; , ? B=' UA , ;BEB ' U, Ø' ' < ;' < ' A ' U ;A<>;' , ' < B ;8Ø' AB0 ; , ; < ' $>;' ;A DØ' HB D' , Ø' ;AB@' UB B:' AB' ;A<>DA;' ;A , ;' B@ B ' U<>2=' 0 ' <;A D' H@' F>0A D' < U , =' < ' ;AB' # D2 0A' DA;:' , =' ;A >0; D' H , ? ' & B22 D;< 8Ø' <>;Y F<0;0:' < ' ;' U, Ø' =B0 , H2B' ;<' , B' A ' B; B , ;' ;<U , =Ø' A Ø' 2B ;6' ;' Ø' ??2B , ' ;A , ;' 9B@:' ' AB' A , =' F<00B00B=' , ' BB' A , =:' U<>2=' A , EB' H <>DA;' < ' , ' H , ; ;2B:' UAB ' AB' U, Ø' < 2@' ;B = D' ;<' = EB' ' , ' B , D>, =6' " < ' H@' 6 ' < ' ;AB' P ;A' & B22 D;< ' A , =' BEB @' , ' >F< ' ;AB' B2=' UA< ' AB8' ;B =B=' ;<' >0B' ' ;AB' DA;:' , =' U<>2=' A , EB' UB2?< B=' , ' , 00 , >2;6' ' ;AB' " B ?A:' < ' ;AB' <;AB ' A , =:' C> <;8Ø' ;A' < FØ' , =' ;AB' ?, E , 2 @' , =

' BB' ;AB' 2B;;B ' M><;B=' < ' F, DB' 6

PP # $ %# " $ ' A ' C#

, ; 22B @ UB B 0; ' , , U, @ ;< ;AB B, 6 AB@ < 2@ ?, B >F ' B, <) B@ < ;AB DA;< ;AB P;A 4;A6

1,00B ,: < B?B E D 9B@80 BF< ;: <=B >F ;< ;AB < ;, ;, H<>;; U< <8??< < ;AB P;A V ,2,;B A<> : H>;; AB 0 0, = ;< A,EB HBB B F2<@B= F E,;B ,;;B 0 ,;1 < ;,D<, & AB AB A,= ,;2,0;, FFB, B=: AB F>0AB= < U, = ,0 B, ;<;AB <<;< ;AB $; 0A F<0 ; < ,0 U,0 0, B: , = B?< < ; B= ;U ;A ?, B6 ;AB BEB D AB = BU >F < =B 0 < , ;;,? D ;AB $>00,?< AB DA;0 ,;;AB <0;,??B00 H2B F< ;0 V ,2< D ;AB # :((%%;A,;2B,=0 < 1 <> ,>F ;< ;AB ?< EB ;: , = ,2< D;AB ?<> ; @ <,= < , ;< <=B , ;, <;<+,2AB <06

AB + ?B < #002 D A,= < AB0 ;,; < UA,;BEB ,H<>;; 0 D , H,;;2B6 B A,= BEB 0BB ;AB # D2 0A HB < B: , = AB2= ?< ?B D ;AB ;AB 0, B E BU0 ,0 ;AB <;AB " B ?A< ?B 0 UA< A,= < BWFB B ?B < & B22 D;< 80 , @6 < B ?< >0B= DB B ,2 R,; < < ;AB 0 < ;> B0 < ;AB * > B < ! < 80 ; <<F0 450a , = 455 =B;B B= ;AB ,?; < < ,22 ;AB , 0A,20 ; 22 ;AB@ A,= ,=B FB 0< ,2 ,?M>, ;, ?B U ;A ;AB BU B B @6 AB # D2 0A UB B ;< HB =B,2;U ;A H@ = ,0; ? < ;,2 ,;;,? 0 F>0AB= A< B U ;A B,2 E D<> 6 ;0 ?> <>0: ,0),F<2B< B , B= 0<< , ;B ;A,;B@ B : UA< A,= HBB H,=2@ HB,;B H@ ;AB # D2 0A ,; 2BW, = , , = 1 , =,: A,= 2B, ; < < B ;A, ;AB <;AB 0: , = ?< ;;B= BW,?;2@ ;AB 0, B B < 0 ,0 A 0 ?<22B,D>B06 B: UA< A,= BWFB B ?B < A 0 ,=EB 0, B0N , =) B@: UA< A,= <;: ,=<F;B= F B? 0B2@ ;AB 0, B ;,?; ?06 AB0B: =BB= : UB B = ?,;B= ; < ;AB H@ 1,00B ,80 < =B ;< ,;;,? ?<2> 0: B,?A ,; 2B,0; , = E 0 < 0; < D: F B?B=B= H@ , 0U, < ' 33%: (AB B U,0 < M>B0; < < ,DB B ,2 ,=E, ?B ,22 ,2< D ;AB 2 B7 ;AB ;U< < F0 < , =B 0 UB B = B?;B= ; < ?A<<0B B,?A A 0 F< ;: , = ;< H B, ;A <>DA ;AB $; 0A , @ , ; ;: H@ < ?B < ,00 , = F,?;6 2@ ;U< 0B?; < 0 < & B22 D;< 80 B 2B F<0 ; < UB B ;< HB ;<>?AB=: ;AB B HB D , 2< D D,F HB;UBB ;AB <HNB?; EB0 ,00 D B= ;<) B@ , = ;< B@ B 6 $>; H@ ;A <U D : < O: B ??<0B< =B , ; B,?A < ;AB ;U< 0A< ; < ;0 0B2B?;B=: 1,00B , ;A<>DA; ;A, ; AB ?<>2= FB B; , ;B ;AB ;A 2 B < ;AB =B B =B 06

BB 1, H<;: 6 F6 0V ;A, ; 2 EB2@ U ;B , @ HB ; >0;B=6

BB "<@80 ,??<> ; < A 0 ;B E BU U ;A ;AB # FB < A 0 ";B 3 % 6

0 < B < ;AB A 0;< , 0 < ;AB H , ; ;2B A , EB ;A<>DA; ; U< ;A UA 2B ;< D EB ;AB 1 , 0A , 280 < =B 0 =B; , 2: , = , @ U ;B 0 A , EB 0?< ?B EB= < 0 0; , ;B= ;AB : ; 0 B?B00 , @ ;< 0; , ;B ;AB AB , ; ; , ? 0 < ;AB = , = P ;A < F0 UB B <; ;< HB 0 >2; , B<>07 B@ B : A , E D ;AB B , 0 B D <> = HB < B A : U , 0 ;<2= ;< <EB 0;6 B Ug 0 ;< 0B2B?; ;AB <0; , ??B00 H2B 0; B; ?A < ;AB A 220 =B A 0 < ; : , = ;< ?2 H ; : U ;A A 0 UA<2B ?< F0 < B < ;U< ?<2> 0: F B?B=B= H@ , 0 0A D 2 B6 , E D D , B= ;AB ? B0; : , = F B ?B= ;AB $; 0A 2 B: AB U , 0 ;< B < A 0 B : , = ;AB = <F =<U ;AB BEB 0B 02<FB < ;AB AB DA; 0 < ;< ;AB < H , < , =: , 2< D UA ?A AB U , 0 ;< F B00 ;AB = B?; < < ;AB ?< EB ; < $>00 , ?<: ;<U , = ;AB B , < & B22 D ;< 80 ?B ; B6

) B@ U , 0 = B?; B= <; ;< <EB ; 22 AB 0A<>2= A , EB 2B , ; ;A , ; B@ B A , = ? <U B= ;AB AB DA; 07 H>; UAB AB 0A<>2= 0BB ;AB = < F0 < ;AB ? B0; : U , 0 ;< 0B = < U , = ;U< ?<2> 0 < , = E 0 < B , ?A , D , 0; ;AB $; 0A 2B ; ?B ; B6 B = E 0 < U , 0 ;< <22<U ;AB # ((%; ;AB <; AB ; ;< <> ; ;AB <>DA F , ; A >F ;AB 0F> < UA ?A ;AB E 22 , DB < >2 , 0; , =06 $<; A ?<2> 0: 2 B ;A<0B < ;AB = < F0: UB B ;< HB F B?B=B= H@ , ; ;A ? 2 B < 0 0AB 06 AB@ UB B ;< A , 2; , = B < UAB ;AB ? B0; < ;AB # D2 0A F<0 ; < 0A<>2= HB ? , B=: , = ;AB ;< , = , F ; ;AB <EB B ;0 ;< 0> ; ;A<0B < B@ B 80 ?< F06

C> <; U , 0 ;< , 00B H2B A 0 ;U< , ; @ = E 0 < 0 HBA = 1 <> , : , = ;< A , EB ;AB B , =@ ;< B < ?B B ;AB) B@ < B@ B , 0 DA; HB BB=B=6 0 , ; 22B @ U , 0 ;< HB F2 , ?B= < ;AB <220 < B , ?A 0 =B < ;AB # : ((%; 0< , 0 ;< HB , H2B ;< A<2= H , ? ;AB , 22 B= , @ : , ; B BF>20 D) B@: ; 0A<>2= , ; ;B F; , < U , = <EB B ;6 1 < ;H > 80 ? , E , 2 @ , = ;AB B0B EB , ; 22B @ UB B ;< HB F2 , ?B= < B ;AB 0 =B < ;AB # : ((%% HBA = C> <;80 ?B ; B

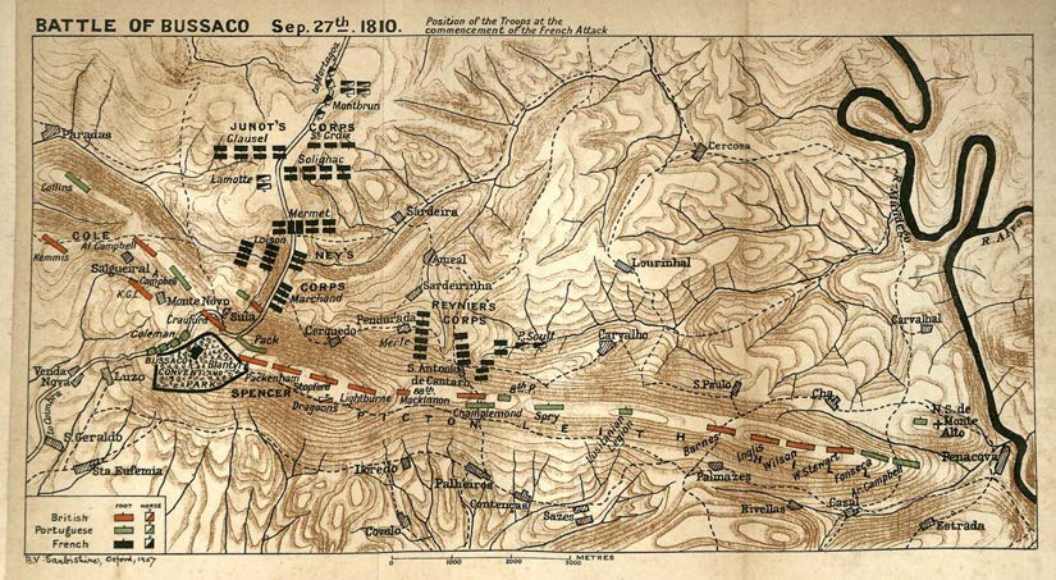
AB A< 0B B UB B <HE <>02@ >0B2B00: 0 , EB ;A , ; ;AB BEB ; < & B22 D ;< HB D =B B , ; B= ;AB@ ?<>2= HB 0B ; < U , = F> 0> ;6) < UB B ;AB D> 0 >?A < B 0B E ?B , H2B6 ;AB@ ?<>2= 0UBBF ;AB 2<UB F , ; 0 < ;AB 02<FB0 < $>00 , ?<: H>; ?<>2= <; B , ?A ; 0 ? B0; U ;A ;AB B6 =BB=: ;AB < 2@ " B ?A , ; 22B @ >0B=

2 0 > F>H2 0AB= =<?> B ; < ;AB @ # 2%(' . : ('# %' .%' 3 8 : % % 0BB 0 ; < A , EB B0? , FB= , 22 A 0; < , 06

AB0B < =B 0 , B F ;B= ;AB FFB = 6E6

P # $ %# " $ ' (0>??B00 >22@ < ;AB BW;=,@UB B;U<H,;;B B0UA ?A)B@80 ?<2> 0<,;;,?;<<U;A;AB ,2<D;AB $ ((%%,0,,0 ;AB B2H<U<<,= <;< ;1<> ,6 AB0B UB B B?; EB , DB<> ,>>=80 ,=+,?80;<<F0:0 ?B;AB2,;;B UB B<,2BEB2U;A;AB :,=<;<;AB A DAB0;?B0;<;AB $;0A F<0;<6 B@ B 80D> 0?<>2=N>0;B,?A;AB 0>;<;AB F,00<,<=B ,;,<:H>;<;0<,0;<F2,@>F<;U;A, @D<<=B0>2;6 ;0 0,=;A,;C><;,=B@ B UB B ,E<><;@ D;AB 6<;,2,;;,?UA ?A1,00B ,A,=?;,;B=:,0U,0,20<%,0R<U0 :;AB +<2 0ADB B ,2UA<?< ,=B=;AB B D BB 0<;AB, @6 " <:;AB ?A B<;AB 0;,:,=#H2=:?< ,=D;AB , ;22B @:0F< B,D, 0;;AB F<2 ?@<;T;, D;AB H>22H@;AB A< 068 1,00B ,:,??<=D;<" <:;> B=<;AB =<>H;B 0U;A;AB U<=0K!<>?< B <;AB <2= @<;AB A B:@<>2 B ,<B>E D7H>;;0;AB 0;; B;A,;&B22 D;<;0BB 0 B,=@;<D EB H,;;2B:,=;U,;;<F<;H@;AB <FF<;> ;@68)B@:;<<:,0UB B,=U;A0< B0>F 0B:0 0,=;<A,EB D EB ;AB <F <;A,;;U<>2=A,EB ABB B,0H2B;<,00,>2;;AB AB DA;0@B0;B=,@:H>;;A,; <U:UAB &B22 D;<;A,=HBB D EB ; B;<H D>F A0 B0B EB0,=0B;;2B A0, @=<U ;<;AB <0;,=E,;,DB<>0F<0;<:;AB F<2 ?@<;, D ;AB< B 0 EB A,=HB?< B=<>H;>26 B;AB B<B,=E 0B=;A,;;AB , @0A<>2=;> ,0=B,=,B,0;<F<;<:UA ?A U<>2=HB <>=> F<;B?;B=0,EB H@2;,6 1,00B ,:,??<=D ;<A0<?,2H<D ,FAB :,<> ?B=K;A,;;AB # FB <A,=<=B B=A ;<,?A<%0H<:<;<F<;<6 A0U,0 B;B2@?<B?;7;AB?,F;>B<%0H<U<>2=B =;AB UA<2B U,:;A,;<F<;<U<>2=F<2<D;:,=H D<=B?0 EB B0>2;6 1<B<EB :;U,0M>;B>?B;,UAB;AB &B22 D;<U<>2=<;HB,H2B;<F BEB ;0>?A,<EB6 B A,0;<<F0 =?AB22<B=,0,,0;AB .<>D,:,=AB?<>2=DB;;<F<;<;A BB ,?AB0:HB?,>0B AB F<00B00B0;AB F<;<<H,#%%UA 2B;AB"B ?A, @:<E D H@U<0B<,=0:U<>2=BM> B EB ,?AB0;<B,?A;68 ;0 0>DDB0;B=;A,;)B@80F<2 ?@U,0

T <"<,A0)5%.%R '25 3F6 O46 $>;A0B B @+B2B;0,@0 SH %*A WW6 F6 J;A,;)B@:2 B B@ B:K=B ,=,2,H,;,22B,D,=0?0686:<UA,;;0U<;A:1,H<;80;,2B:6 O6


BATTLE OF BUSSACO Sep. 27th. 1810.
Position of the Troops at the commencement of the French Attack
Montbrun
JUNOT'S CORPS
Clausel
St Croix
Solignac
Lamotte
Paradas
Collins
Mermet
Sardeira
Tilson
COLE
Al Campbell
Kemmis
NEY'S CORPS
Marchand
Sulgueiral
Campbell
K.G.L.
Monte Novo
Craufurd
Sula
Coleman
Pack
Cerquedo
Pendurada
Merle
REYNIER'S CORPS
Ameal
Sardemunha
S. Antonio de Cantaro
Lightburne
Dragoons
Champlemond
Spry
Lamartinière
Barnes
Inglis
Wilson
Stewart
Fonseca
Campbell
Palmazes
Rivellas
Casal
Estrada
Penacova
N.S. de Monte Alto
Cercosa
Lourinhal
Carvalhal
S. Paulo
Crab
Venda Nova
Luzo
Blossac
Convent
Bussaco
Village
Hay
Packenham
Hoghland
SPENCER
Mackinnon
Coimbra
S. Geraldo
Sta Eufemia
Ixeredo
Palhaeiros
Contenças
Sazes
Covalo
British
Portuguese
French
FOOT
HORSE
METRES
0
1000
2000
3000
S.V. Saunderson, Oxford, 1809

B,22@ ;< D<,= A 0 0>FB < ; < , D ;AB W ; ,2 , ; ; , ? ; , ; $>00,?<: H@ B D D ;< HB2 BEB ; = , DB <>0 , = ;< ?<> 0B2 ;0 ,H, =< B ;6 "< AB ;A<>DA; ;A, ; 1 ,00B , U<>2= =<F B? 0B2@ ;AB <FF<0 ;B < UA, ; AB U,0 ,=E 0B=: <>; < A 0 FB 0< ,2 = 02 B < A 0B2 : , = DB B ,2 = 0; ,0;B < A,E D ?<> 0B2 ;A >0; >F< A 6 ;A 0 U,0 0<: ;AB * > B < #2?A DB ?, B=A 0 F< ; V ; <;AB B ; B = 0?< ;> B H<;A < A 0B2 , = A 0 ?< , =B ?A B 6

;AB P;A: , ;B 1 ,00B , A,= B; B= ;< A 0 AB,= M>, ;B 0 , ; 1 < ; ,D<, : ;AB B U,0 , 2 ; ;2B 0 0A D < ;AB # D2 0A DA; ?B ; B: UAB B B@ B 80 ,=E, ?B= D>, = = <EB ;AB 2 DA; ?< F, @ < ;AB ;A < 0< B <220 , ; ;AB <<; < ;AB AB DA;0: <FF<0 ;B , ;< < =B , ; , <6 1 >?A , H<>; ;AB 0, B ; B ;AB B U,0 0< B H ? B D < 9B@80 < ;6 ;AB F ? B;0 < + , ? 80 O;A , ,=< B0 , = , > > =80 5 ;A UB B , ; ; , ? B=: H>; AB2= ;AB D <> =6 AB ?< ;B0; U,0 BEB EB @ 0B <>0 , = ;AB B = B= =<U , ; =>0 6 A, ; BEB D ;AB $; 0A , @ 02BF; < =B < H, ; ;2B: K B, ?A , U ;A A 0 B2<? A 0 D ,0F , ; A 0 F<0;6 AB B UB B < B0: , = ;AB =B, ;A 2 B 0; 22 B00 ;A, ; B D B= ;A <>DA<>; ;AB 2 B U,0 < 2@ ;B >F;B= H@ ;AB <??,0 < ,2 ?A,22B DB < , ,=E, ?B= 0B ; @: < , , =< 0A<; B= , ; 0< B ,D , @ <B68 $B2<U , = < ;: ,22 ;AB 2<U A 220 HBA = 1 <> , , = , ;< < UB B H DA; U ;A ;AB H E<>, ? B0 < ;AB " B ?A: < UA ?A ;A BB D B, ; ,00B0 ?<>2= HB = 0; D> 0AB=: , D ;AB F<0 ; < < ;AB =: P;A: , = ;A < F0c6

AB =, U < ;AB 4;A U,0 0< BUA, ; 0;@: H>; ,0 0<< ,0 ;AB2 DA; U,0 0; < D B <>DA B@ B ?< B ?B= A 0 , ; ; , ? 6 B A, = ?A<0B < A 0 <HNB?; EB: ,0 U,0 , ;> ,2: ;AB 2<UB0; F< ; < ;AB =DB <FF<0 ;B A : ;AB = F UAB B ;AB ?<> ; @ <, = < , ;< < =B , ; , <? <00B0 ;AB B ,6 0 ; U< = E 0 < 0: ,??< = D ;< < =B : UB B = , U >F ;U< AB, E@ ?<2> 0 F BY ?B=B= H@ , =B 0B 0U, < ' 33%: (B>=B2B;80 = E 0 < < ;AB 2B ; U,0 , ? <00 ;AB A DA <, =: U ;A ;AB 0; %BDB < ;: ;AB ; ;AB ;U< BD B ;0 < " <@80 H D, =B: ;AB 4 ;A , = 4;A %BDB : U ;A ;AB O4;A B0B EB6 AB UA<2B , =B H, ; ; , 2 < 0:

T 22 ;A 0 0 ;<2= , ; D B, ; 2B D;A 9<?A 0 H % . % ((% E 6 F6 : UAB B ;AB <> ? 2 < & , 0 =B0? HB= U ;A , @ =B; , 206

T (, ; ; , 80 @ . 2% ' : %(' G '# '#% 99'# FF6 5: , = %B ;A , @: 6 6

<1 606 $H

< ' : ' B 6 1 B 2B8O = E 0 < ' A,=';AB' DA;:', =' U,O';<',;;,?' < ;A'<';AB' <,='6 <' ;O' B2BEB' H,;;,2 < 0:' , D'P: ' B :' ;AB' P;A'<';AB' % B'2B=:';AB' ='%BDB' <22<UB=:';AB'O;A'%BDB' H <>DA;'>F';AB' B, 6 22' ;AB' H,;;,2 < 0' UB B' '0B B='?<2> ' U ;A' ,' < ;'<'<B' ?< F, @'< 2@:', =' B,?A' BD B ;' ;AB' ;A BB:'<' <> :' H,;;,2 < 0' UB B'< D ,22@' = ,U '>F' < B' HBA =' ;AB' <;AB 6 $>;' ;AB' E<2> ;, @' 0UB E D'<';AB',;;,?'0<<' ;> B='AB';U<' = E 0 < O' ;<', ' BD>2,' B?AB2<'<'H,;;,2 < ' ?<2> 0:' ;AB' DA;' 'BEB @'?,0B'2B,= D6 ='AB' <>DA BOO' < ';AB' A 220 =B' 0<<' H < B' ;AB' < =B B=' , 0' <'B,?A' ?<2> ' ;<',' D B,;' ??2> F' <' B :' 0<' ;A,;' ;<' ;AB' $; 0A' =B B =B O' <';AB' =DB';AB',00,>2;' 0BB B=';<' HB' =B2 EB B='H@',' 0; D' <' 0 ,22' ? <U=0' ? <00 D' ;AB' A 220 =B' = ,D< ,22@6 ;' O' ?> <>O' ;A,;' B@ B'F2,?B=' <' ; <<FO' ;<' A O' 2B ;' <';AB' <,='7 ,'0;>=@' <' A O' <=B O' I,O' <';A<0B' <' 1,00B ,'8J' 2B,=0' ;<', '0>0F ? F ';A,;';AB@'A,=' , 2B=';<' = 0?<EB'%B ;A8O' = E 0 < :', ='0; 22' < B' 2280:', =' ,D B='A,;';AB' <,='U,O'<';AB' BW; B B' DA;:' <;' ';AB' DA; ?B ; B:'<';AB' $; 0A' F<0 ; < 6 ;AB U 0B' B@ B'U<>2='A,EB' ;, B'0< B' F B?,>; <';<' D>, ='A 0B2' <' ,' 2, ' ,;;,?' < '%B ;A:';<' UA ?A' AB' U,O' =B2 HB ,;B2@' BWF<0 D' A O' 2B ;' ?<2> 6

AB B' UB B:',O' A,O' ,2 B,=@' HBB' F< ;B='<>;:' 0BEB ,2' D,FO' ';AB' B 2B' $; 0A' 2 B6 B' U,O' HB;UBB';AB' ;A' BD B ;' <' +< ;>D>B0B:'<'%B ;A8O' BW; B B' 2B ;:', ='AB' BO;'<';AB' ;A' * E 0 < 6 <;AB' U,O' HB;UBB' + ?;< 8O' ; <<FO' ,;' ;AB' F,00' <' , ' ;< <', ='A O' 2B ;' U DV ;AB' ;A', ='% DA;H> B8O' H D,=B6 $B;UBB' ;AB' O ;A', ='AB' ;A' ;AB B'U,O' ;A 8BB' M>, ;B O'<' ,' 2B'<' > <??>F B='D <> =6 AB' 0;' D,F'2B='; <' <' =, DB :' ;AB' 0B?< =' ?,>0B='<' ,' < B ;' ,' 0B <>O' ? 0 06 >?A' U,O' =BB='2 <0;'H<> =';<'<??>' UAB' ,'2 B'0<'2< D' U,O' AB2='H@'0>?A',' 0 ,22' , @6 $>;' ;A O' < D';AB B', <0B';AB' 0FB? ,2' =, DB' ;A,;' <D' A ='AB' 0;' <EB B ;O' <';AB' B B @' < ';AB' B@B:' ' <;' < ';AB' B, 6

1 B 2B8O = E 0 < '0BB O' ;<' A,EB' HBB';AB' 0;'<' B@ B 8O' ;U<' ?<2> O' ;<' <EB6 ,;' =,U :' U ;A' ;AB' 0;' 2@ D' ;A ? '<' <';AB' A 220 =B:' ;' HBD,' ;<' <EB' >F';AB' 0;BBF' 02<FB' 0< B';A BB M>, ;B 0

' 1,00B ,8O' <=B O' <' ;AB' H,;;2B' ?,22' B@ B 8O' ,;;,?' <' B' <' K 2,' = <;B' =B' 8, BB' B B B:'8 H>;' ;' U,O' B,22@' <' ';AB' DA; ?B ; B6 22' , ='%B ;A' BW;B = D' <' M>' 2BO' 0<>;A' <' ;AB' F< ;' ,00, 2B=6

< ', 2B ;< ;AB DA;' < ';AB ,> ;< < + , 2AB <0 <, =6 B B ;0 ' 33%: (? , B ' ?< ; , ?;' U ;A ;AB 2 DA;' ?< F, B0 < ';AB 4O;A: ;A: , =' O ;A BD B ;0: UA ?A UB B 0; > D <>;' , 2< D ;AB < ;: , =' 0<< ' HBD, ' ;<' F>0A ;A 0 ;A ' 2 B >F A 226 "< ' 0< B B,0< ' > =B;B B=V ,' ; ? ' < ' ;AB 0;: < ' ,' HB =' < ' ;AB A 220 =B V ;AB ;A BB " B ?A BD B ;0 ,22 AB,=B=' 0< BUA,;' ;<' ;AB ' 2B ;: 0<' ,0 ;<' F,00 ,? <00 ;AB < ;' < ' ;AB ;A: , =' ;<' = B?;' ;AB ' ,=E, ?B F B? 0B2@ ;<' ;AB > <??>F B=' F B?B' < '? B0;' HB;UBB ' ;A,;' BD B ;' , =' ;AB ; <<F0 F2,?B=' B= ,;B2@ ,H<EB ;AB F,00 < ' , ' ;< <6 AB ' F <D B00 U,0 02<U6 ;AB ' 33%: (2B ;' , ' HBA =' ;AB ' ;AB B2BEB ' H,;;,2 < ?<2> 0:' UA ?A UB B ; , F2 D ;A <>DA ;AB=B 0B ,;;B=' AB,;AB ' UA ?A AB B ?<EB 0 ;AB A 220 =B6 B, D ;AB H ? B ' < ';AB 0 0A D , ';<' A 0 2B ;: " ?;< ' ;<< ' ;AB ,2, :' , =' ;A<>DA' AB ?<>2=' 0BB <;A D ' ;AB <D:' =B;,?AB=' 0;' ,' U D' < ';AB O ;A > =B ' 1 ,N< ' (U@ B:' , =' ;AB ' ;AB ;U<' H,;;,2 < 0 < ';AB ;A' +< ;>Y D>B0B:' ;<' 22 ;AB > <??>F B=' 0F,?B UA ?A ;B EB B=' HB;UBB ' A ' , =' ;AB ;A6 ' AB A,=' 0>0FB?;B=' ;AB 0; B D;A' < ';AB ?<2> ' ;A,;' U,0 , D ,;' ;' AB U<>2=' A,EB 0B ;' < B6 $>;' AB U,0 ,2 B,=@ = 0; ,?;B=' H@ ;AB < ;,2 ,;;,? ' < ' B>=B2B;80 E, D>, =' ,2< D ;AB A DA <,=6 ' ?<2> ' < ' <> ' H,;;,2 < 0V ' ;AB 0;' %BDB V U,0 F>0A D >F ;AB <,=:' , =' = E D ' ;AB 0 0AB 0 < ' A, F2B < =80 +< ;>D>B0B H D,=B6 C>0;' ,;' ;A 0 < B ;' ;AB 0;' HBD, ' ;<' 2 ;:' , =' B ;0?A 2=;80 D> 0 <FB B=' < ' ;AB H <,=' ,00:' , =' HBD, ' ;<' F2<>DA' 2< D' 2, B0 ;2> <>DA' ;6 ;' 0; 22 ,=E, ?B=:' H>;' U,0 0<< ' H <>DA;' ;<' ,' 0; , =Y 0; 22 H@ ;AB B < ';AB $; 0A 4O;A , =' +< ;>D>B0B 0;' UA ?A UB B = ,U ' >F ' 2 B ;<' DA;' , =' 2B ;:' ,' 2 ;;2B' HB2<U' ;AB D> 06 AB 0;' %BDB ' ; B=' ;<' =BF2<@:' H>;' U ;A 0 ,22 0>??B00:' B,?A 0B?; < ' HB D' 0UBF;' ,U,@ H@ ;AB ?< EB D D' B < ';AB D2< ' +< ;>D>B0B >0 B; @:' ,0 ;' 0; <EB ;<' 2B <>;' < ' ;AB = 0< =B B=' ,006) BEB ;AB2B00:' ;AB " B ?A BD B ;' D,22, ;2@ AB2=' ;0 D <> =' < ' 0< B ; B:' 0A ; D D ,=>,22@ ;<U, =0 ;0 DA;' ;<' ,E< =' ;AB B < ';AB D> 0:' , =' D, D ,' 2 ;;2B' < ';AB A 220 =B ' ;A,;' = B?; < ' E ;A ;0 0;' H,;;,2 < :' EA 2B ;AB <;AB ' ;A BB UB B ;B = D ;<' B=DB ,U,@ < ';AB <,=:' , =' ;<' H B, ' >F ;<' ,' 0A,FB2B00 ? <U=

T AB %(< '%B < B ' *B2, <00B:' ,'?,F;, ' ';AB 0;'%BDB :D EB ,' BW?B22B ;' , =' ??B, ' ,??<> ;' < ';0 0> B D0@0BB FF6 P5 4 ' < 'A 0 U< 6

+ ?;< ' 0<< ' 0,U ;A,;' ;AB B U,0 <' =, DB ' AB B:' A, =B=' <EB ' ;AB' ?< , =' ,;' ;AB' +,00 < ' , ' ;< <' ;<' 1,? < :' , =' 0;, ;B=' < "';<U, =0 A 0 2B ;:' UAB B' ;AB' D U,0 D <U D AB,E B ' BEB @' >;B:' , =' ;AB' E,0;' ?<2> ' < ' 1 B 2B80 = E 0 < :' ?2 H D' ;AB' A 220 =B' = ,D< ,22@:' A,=' HB?< B' E 0 H2B' ;A <>DA' ;AB' 0;6

;' U,0 < ;> ,;B' ;A,;' ;AB' ,;;,? ' < ' 1 B 2B' U,0 ,=B' EB @' 02<U' H@' ;AB' 0;BBF B00 < ' ;AB' A 220 =B' , =' ;AB' AB,;AB ' ;A,;'?2> D' ,H<>;' ;AB' 0<2= B 0 0;6 H2 D' BB;6 "< ' ;AB' 2B,= D' BD B ;' B,?AB=' ;AB' ? B0;' HB < B' ;AB B' UB B' , @' $; 0A' ; <<F0' @B;' B0;,H2 0AB=' < ' ;AB' F< ;' ,;' UA ?A' ;' , B=6 ;' U,0 2> ?A D' <EB ' ;AB' 0 @ 2 B' < ' ;<' ;AB' 2 ;;2B' F2,;B,>' ,H<EB:' N>0;' ,0 ;AB' =B B =B 0' , EB=V ;AB ;A' =B0?B = D' < ' ;AB' $; 0A' 2B ;:' ;AB' U D' < ' 6AB' O ;A' , =' ;AB' ;U<' H,;;,2 < 0' < ' ;AB' ;A' +< ;>D>B0B' ?< D' ,2< D' ;AB' A 22 ' <,=' < ' ;AB' DA;6 ' ;AB' " B ?A' A,=' HBB ' D , ;B=' ;B ' >;B0' ;<' B0;' < ' ;AB' ,; D>B' < ' ;AB ' 2< D' ?2 H:' , =' ;<' B?<EB ' ;AB ' < =B :' ;AB@' DA;' A,EB' H < B ' ;AB' $; 0A' 2 B6 $>;' & ,22,?B:' ;AB' ?< , =B ' < ';AB' ;A:' U,0 < B' < ' & B22 D;< 80 HB0;' ?<2< B20:' ;AB' EB @' , ' < ' ;AB' B B DB ?@6 BB D' ;A,;' ;AB' " B ?A' >0;' HB' ?A, DB=' ,;' < ?B:' B B' ;AB@' A,=' ; B' ;<' , B' ,' < ;:' AB' ;A BU' <>;' ;A BB' < ' A 0' ?< F, B0' ,0 0 0AB 0' ;<' ?<EB ' A 0' 2, 0:' ?,22B=' ;<' ;AB' U D' < ' ;AB' O ;A' ;<' ,22' ' < ' A 0' DA;:' , =' ?A, DB=' = ,D< ,22@' ,? <00' ;AB' 2 ;;2B' F2,;B,>' < ' ;<' ;AB' 2, ' < ' ;AB' D B,;' = 0< =B B=' ,00' HB < B' A 6 ;' ;AB' 0, B' < B ;' ;AB' ;A' +< ;>D>B0B:' ,' 2 ;;2B' > ;AB ' ,2< D' ;AB' A 22;<F:' =BF2<@B=' , =' <FB B=' ,' <22 D' B' ,D, 0;' ;AB' < ;' < ' ;AB' B B @:' UA 2B' & B22 D;< ' A 0B2 :' UA<' A,=' HBB ' ?,22B=' =<U ' < ' A 0' F<0;' < ' <H0B E,; < ' < ' ;AB' < EB ;' AB DA;' H@' ;AB' < 0B' < ' ;AB' DA; D:' ?, B' >F' U ;A' ;U<' < ' A< F0< 80' D> 0:' , =' ;> B=' ;AB ' B' >F< ' ;AB' 2, ' , =' B, ' < ' ;AB' ?2 H D' ,00:' UA ?A' U,0' 0; 22' 0> D D' >F' ;AB' A 220 =B6 FF, B ;2@' ,;' ;AB' 0, B' 0;, ;' ;AB' 2 DA;' ?< F, B0' < ' ;AB' O ;A' , =' ;A:' UA ?A' A,=' HBB ' B D,DB=' ' ;AB' B, 2 B ' 0 0A D' U ;A' ;AB' " B ?A' ' 33%: (' , =' A,=' HBB ' = EB ' , ' ,U,@' ;<' ;AB ' DA;:' UB B' ,22 B=' H@' + ?;< ' ' FB 0< :' , =' H <>DA;' >F' ,2< D' ;AB' F2,;B,>:' ;<' ;AB' DA;' < ' ;AB' ;A' +< ;>D>B0B6 AB@' = BU' >F' < 2@' 0 W;@' @, =0' < ' ;AB' 2, ' < ';AB' 2B,= D' " B ?A' BD B ;:' , =' <FB B=' ,' <22 D' B' >F< ' ;6

;' , @' <;AB ' N> ?;> B' , =' < ' , @' <;AB ' D <> =:' <> ' H,;;,2 < 0' U<>2=' A,EB' HBB ' AB2F2B00' ,D, 0;' B2BEB 6 $>;' & ,2

2,?B A,= ?,>DA; ;AB F0@?A<2<D ?,2 < B ;G ;AB " B ?A P;A:
=B,= HB,; < ;0 ?2 H:, = A<FB2B00 = 0< =B :U,0 E <2B ;2@
?A, DB= 2, H@ ;AB < ,>DA; , DB 0 , =;AB U D <
;AB O ;A: UA 2B ;U,0 N>0; D, ;AB D ;0B2 >F ;< > >F<
;AB +< ;>D>B0B H, ; ;,2 < 0 ;A, ;2,@ ;0 < ;6 AB " B ?A
A,= <; B ;< B,2 RB ;AB F<0 ; < :< ;< , ;AB 0 ,22 B00
< ;AB < ?B <FF<0B= ;< ;AB :UAB ;AB H2<U B226 AB <>
H, ; ;,2 < 0 < ;AB P;A UB B WK<22B= =<U A 22 , = ;< ;AB 2B ;
H@ ;AB H2,0; D B < & ,22,?B80 2 ; ;2B < ?B: <22<UB= H@ ,
=B0FB ,;B H,@< B; ?A, DB6 AB@ UB B ;A >0; 0 =BU,@0 ,D, 0;
;AB = %?DB :UA ?A U,0 N>0; B,?A D ;AB 0 @ 2 B< ;AB 2B ;:
, =U,0 HBD D ;<0; >DD2B , < D 0< B <? 0 UA ?A AB B
? <U ;AB ? B0; < ;AB AB DA;06 AB ;AB UA<2B ,00 D, EB U,@:
; , F2B= =<U ;AB O;A %?DB ;AB B, :, = >0AB= =<U ;AB
02<FB6 K 22 U,0 ?< >0 < , = >F <, :0 < B: B: , = H>22B;0:
" B ?A < ?B 0 , = 0<2= B 0: = > B 0 , = = > 0: <? B=
=<U BEB @ = B?; < 7 $; 0A: " B ?A:, =+< ;>D>B0B WB=
;<DB;AB 7 UA 2B ;AB =0; < ,22 U,0 ;< HB 0BB & ,22,?B
DA; D2 B A 0 , ?B0;< <2=: , = 0; ' ?,22 D ;< A 0 0<2= B 0
;< F B00 < U, =6c B BEB 02,? B B= A 0 B UA 2B , " B ?AY
, U,0 U ;A A 0 B,?A: , = <22<UB= ;AB =<U ;< ;AB
B=DB < ;AB A 22: UAB B AB < B= A 0 B 2 B U, ; D <
, @< =B ;A, ;AB DA; B?B EB: < , @ B0A H<=@ ;A, ; DA;
, ; ;,? A A 0 U,0 ?B ; , 2@< B < ;AB <0; ; B2@, =
D,22, ; 0; < B0 ,=B H@ , BD B ; ,2 ?< , =B => D ;AB
U, :, = ;AB D2< @ U,0 ,22 & ,22,?B80 <U :,0 + ?;< EB @A, =Y
0< B2@ <U B=6 K AB <2< B2 < ;AB ;A , = 1 ,N< (U@ B
< ;AB O ;A , B B ; ;2B= ;< ;AB UA<2B < ;AB ? B= ;:8 AB WE <;B ;<
& B22 D;< :K , = ?, ?2, < B ;UA, ;BEB ;AB BWB?>; EB
F, ;< ;A, ;H 22 , ;BWF2< ;: UA ?A @<> %< =0A F A,0 0< A DA2@
, = 0<N>0;2@ BW;<22B= H

AB E ?;< <>0 $; 0A ; <<F0 <22<UB= ;AB B B @ , =<U
;AB A 220 =B: ; 22 ;AB@ ?, B > =B ;AB B < B@ B 80 , ; 22B @:

T (,;;, 80 @.2% ': %G '# '#% :5#" > 5% (F6 6
T + ?;< ;< & B22 D;< :9:))3% % ' ;1 () ' #%(E6 F6 P 6 =< <;
<U UAB;AB & ,22,?B B,22@ =B0?B =B= < ;AB , <>0 & 22 , :
H>; ,> > = < ;AB % DA; * E 0 < I,0 A 0 =B0?B =, ;, = H <D ,FAB
A,0 F< ;B= <>; ;< BJ ?A, ?B= ;< A,EB ,?< BW < U ;A ;AB 9 DA;
< #22B 02 B6

, =' UB B' U, B=' ;<' B; B' ;<' ;AB ' < B ' F<0 ; < 6' AB@' ;A>0'
00B=' ;AB' 2,0;' BF 0<=B' < ' B@ B 80', ;;,? :' UA ?A' <??> B=' ,2< D'
;AB' A '0 =B' N>0;' ;<' ;AB' 2B ;' < ' ;AB' F< ;' ,;' UA ?A' ;AB ' ?<22 0 < '
U ;A' 1 B 2B80' H,;;,2 < 0' A,=' ;, B ' F2,?B6' AB' < , =B ' < '
;AB' =' < F0:' 0BB D' A 0' DA;' ?<2> ' <22 D' =<U ' ;AB' 02<FB:'
UA 2B' ;AB' 0;' U,0' B2; D' ,U,@:' , =' D ,=>,22@' D E D' D <> ='
> =B ' ;AB' B' < ' ;AB' D2< +< ;>D>B0B' ; <<F0' ,;' ;AB' +,00' < '
, ' ;< <:' A> B=' ;<' "<@80' H D,=B' , =' 0;, ;B=' ;' >F' ;AB' A 22'
;<' ;AB' DA;' < ' ;AB' 0;6' "<@' A,=' HBB ' ;<2=' ;<' 0>FF< ;' ;A,;'
BD B ;:' H>;' A,=' ;,2?B ' B@ B 80' < =B 0' ;<' B, ' ;A,;' AB' U,0'
;<' <22<U' >F' ;0' ,=E, ?B' UAB ' ;' HBD, ' ;<' , B' AB,=U,@6' 0'
< F0 < , =B ' ?, ;B B=' >F' ;<' A ' 0A<>; D' , D 2@:' K' & A@'
=< 8;' @<>' 0;, ;' < ' ;AB' ?2 H' ! <>' ?<>2=' DB;' ;AB' ; <<F0' < Y
U, =' ' @<>' ?A<<0B:' H>;' @<>' =< 8;' ?A<<0B68' & AB B>F< ' "<@'
<=B' ;<' ;AB' 2B,= D' BD B ;' < ' A 0' H D,=B:' ;AB' 4;A' %BDB :'
F>;' A 0B2 ' ,;' ;0' AB,=:' , =' HBD, ' ;<' ,0?B =' ;AB' AB DA;0:' A 0'
<;AB ' BD B ;:' ;AB' 4 ;A:' <22<U D' ' B?AB2< ' < ' A 0' 2B ;' B, 6'
;' ;A 0' < B ;' 1 B 2B80' = E 0 < ' E,0' 0; 22' E 0 H2B:' ,22 D' H,? '
' D B,;' = 0< =B ' 0< B' U,@' ;<' ;AB' DA;:' , =' F> 0>B=' H@' & ,22,?B'
V ,' = 0?<> ,D D' 0 DA;' < ' ;AB' 0BEB ' H,;;,2 < 0' ;A,;' UB B' ,H<>;'
;<' BFB,;' ;0' BWFB B ;6' "<@' ?A<0B' ,0' A 0' <HNB?; EB' ;AB' 0;'
, =' 2<UB0;' A 22;<F' ;<' ;AB' " B ?A' DA;' < ' ;AB' F,00' < ' , '
;< <:' , =' ;<< ' A 0' 0; D' < ' ?<2> 0:' ;AB' DA;' ,2U,@0' 2B,=Y
D:' >F' ;<U, =0' ;' ,;' 0>?A' F,?B' ,0' U,0' F<00 H2B' <EB ' ;AB' 2< D'
AB,;AB :' , =' , < D' ;AB' <??,0 < ,2' F,;?AB0' < ' 0;< B06' AB'
; <<F0' UA ?A' EB B' ' < ;' < ' ;AB ' AB B' UB B' ;A<0B' 0B?; < 0' < '
+ ?;< 80' = E 0 < ' UA ?A' UB B' B ;AB ' , ' , E,@' < ' ;AB' # D2 0A'
2B ;' U ;A' &,22,?B' , =' % DA;H> B:' < ' ,?; EB2@' B D,DB=' < ' ;AB'
<,=' ,D, 0;' ;AB' 0;' %BDB :' E R6' ;AB' DA;' U D' < ' ;AB' $; 0A'
O ;A' > =B ' <2< B2' 1 B,=B:' , =' ;AB' +< ;>D>B0B' ;A' < ' ;AB' % B'
EA ?A' A,=' N>0;' HBB ' , = D' ' ;AB' BF>20B' < ' 1 B 2B6' AB0B' EB B'
0<< ' , ;B U, =0' N< B=' H@' < B' H,;;,2 < ' < ' ;AB' 5;A' +< ;>D>B0B'
< ' A, F2B < =80' H D,=B:' , =' ;AB' > ,;;,?AB=' H,;;,2 < ' < '
A< , ' 2 ; ,:' UA ?A' + ?;< ' 0B ;' >F' ;AB' A 226' ! B;' ;A 0' U,0'
0; 22' , ' ;<<' 0 ,22N ,' < ?B' ;<' B0 0;' "<@80' 0BEB ' H,;;,2 < 0:' > 2B00'
0FBB= 2@' 0>FF< ;B=6

$>;' 0>FF< ;' ' 0> ? B ;' M>, ; ;@' U,0' < ;A?< D6' (B B ,2'
%B ;A' A,=' B?B EB=' < =B 0' < ' & B22 D;< ' ;<' ?2<0B' ' ;<' + ?;< 80'
DA;' ' AB' 0,U' <' A<0; 2B' ; <<F0' ' A 0' <U ' < ;6' 0' ;' E,0

??2B,';A,;' B@ B'A,=' BF;' <' B0B \B0'<'2, D'=B;,?A B ;0' ;<';AB'0<>;A'<';AB'A DA <,=:' ;'U,0'F<00 H2B'<';AB' ;A'*E0<' ;<' <EB',;'<?B 6' .A2B';AB' <D'U,0'0;22'A, D D';A?2@' ,2< D';AB'?B0;0'<';AB' B ,:'%B;A'<=B B=',' DB B ,2' <EB'<' A0'H D,=B0';<';AB'2B;:'UA2B' 22'=B;,?AB=';<<F0' <';AB' 0<>;AB' B='<';AB'F<0;<';<'<??>F@';AB'AB DA;0'UA?A';AB' ;A'*E0<'U,0'BE,?>,; D6' A0'DB B ,2' <EB';<';AB'2B;' U,0'?, B='<>;',2< D';AB' <>DA'H>;'0B E?B,H2B'?<> ; @ <,=' UA?A'F,00B0',2< D';AB' B,'<';AB'F2,;B,>:'<>;'<'0DA;'<';AB' " B ?A6' ;';AB' < B ;'UAB' "<@80',;;,?'U,0'HBD D:' %B;A'A,='N>0;' B,?AB=';AB'+,00'<' , ' ;< <:'U;A' F @80' +< ;>D>B0B'H D,=B',;';AB'AB,='<'A0'?<2> :';AB'';AB';U<' H,;;,2<0'<';AB'%>0;, ,'2BD<:', ='2,0;2@:'$, B080'$;0A' H D,=B6' B'<'*?0<80'+< ;>D>B0B'H,;;B B0'U,0',20<'U;A' A 6' B'=<FFB='AB'D>0',';AB'F,00';<', =' B ;0?A2=;80' H,;;B@:'UA<0B' B'U,0'HBD D';<02,?B'<'U,';'<' , > ;<:', ='2B;' F@' ';AB'B,', ='AB'%BD<,@' H,;;,2<0'<';AB'?<> ; @ <,=A, =H@:'UA2B'AB'H <>DA;'>F' $, B080'H D,=B';<';AB' < ;:', =' BF< ;B='A0', E,2';<'+?;<6' AB'2,;;B'0, =:' ;' ,FFB,0:';A,;'AB'U,0'0;<D'B <>DA',;'AB' +,00:'H>;'U<>2='HB'<H2 DB=' '%B;A'U<>2=',;;B ='<';AB',;;,?' UA?A'U,0'HB D' ,=B',;';A0' <B;'<';AB'AB DA;';<';0' B=,;B'2B;'' A0' <EB B;'<'"<@80'U,0' <U'HB?< D

'%B;A80' BFABU', =', =B=B?, F:'%B;2' ,@:'A,='BWF2<B=',22';AB' E22,DB0' ';A0'=B?;<'<';AB'F BE <>0',;B <<:'U;A','0M>,=<'<' +< ;>D>B0B'A< 0B:'0BB'A0'K '2%'6 6

T'+?;<', ='%B;A'B,?A ,;AB'02>'<EB';AB'F,;';,B'H@';AB' <;AB' ';AB'F, ,22BZ , ,;EB0'<';AB'?0 06' +?;<'0,@0';A,;'AB' ;<<'?< , ='<'%B;A80';<<F0'6!',;'A0' <B;'1,N< (B B ,2'%B;A80' ,=B=B?, F'?, B'>F';<'BF<;';AB', E,2'<';A,;'DB B ,2', =A0' =E0<:'<'UA?A' '<=B' <';AB'F<0;'<', ' ;< <';<';AB'<,='<' ?< > ?,;<:', ='=B?;B=';AB'2B,=D'BD B;'<';AB'H D,=B';<' F<?BB='U;A<>;'2<00'<';B';<';AB'2B;:',0' A,=' <'<??,0<' <' ,00 0;,?B6 (B B ,2'%B;A80'H D,=B:' '?<0BM>B?B:' <EB='<', =' EB=' ';B';<N<';AB'EB'?<F,B0'<';AB'O;A',='AB';A'+<;>Y D>B0B' 'BF>20 D';AB'B B @80'2,0;,;;B F;68' %B;A:'<';AB'<;AB'A,=:' 0FB,0'<'A,E D'2,B'?< ,='<'0<B'<'+?;<80';<<F0:',0' ';AB' 2,;;B'A,=' <;'HBB'F B0B;:', ='0,@0'<>DA;'<';AB'?<EB 0,;<6'!'1,N<' (B B ,2'%B;A'<;ABW8B>F<'='B?;B='<EB B;'<'0>??B00<:'<=B D' <2<B2'*<>D2,0'U;A';AB'DA;'H,;;,2<'<';AB';A'+<;>D>B0B';<'0>FF<;' ;AB'F<;',;;,?B=6 B',20<=B?;B='AB'5;A'+<;>D>B0B'>=B'<2<B2

=, DB <>0G < ? D' A 0' U,@' ;<' ;AB' 0> ;' > =B ' ,' =B0; >?; EB' B:' AB' A,=' B;' < ' ;AB' B=DB' < ' ;AB' F2,;B,>' ;AB' ;A BB' +< ;>D>B0B' H,;;,2 < 0' , =' ;AB' U D' < ' ;AB' $; 0A:' O ;A:' , =' A,=' = EB ' ;AB ' H,? V ;AB' A< , ' 2 ; ,' H < B' , =' 2B=' =<U ' ;AB' B, ' =B?2 E ;@' < ' ;AB' AB DA;0:' , =' ;AB' ;A' +< ;>D>B0B:' ;A<>DA' ;AB@' = =' <;' 2@:' D,EB' U,@' , =' B22' H,? ' ' = 0< =B 6' C>0;' ,;' ;A 0' < B ;' %B ;A:' U ;A' $, B0%0' ;A BB' H,;;,2 < 0:' ?, B' >F' ,2< D' ;AB' ?< > ?,;< <,=' ,;' ;AB' H,? ' < ' ;AB' F2,;B,>6' K' ' AB,E@' B' < ' >0 B; @:8' U ;B0' %B ;A:' K' U,0' HB D' BF;' >F' >F< ' ;AB' AB DA;0:' ;AB' 0 < B' < ' UA ?A' F BEB ;B=' ,' ??2B, ' E BU' < ' ;AB' 0;,;B' < ' ;A D06' $>;' UAB ' ;AB' <? ' < D' ;AB' A DA' F, ;' < ' ;AB' B ,' HB?, B' E 0 H2B:' ;AB' B B @',FFB, B=' ;<' HB' ' >22' F<00B00 < ' < ' ;' , =' ,' " B ?A' < ?B ' U,0' ' ;AB' ,?;' < ' ?ABB D:' U ;A' A 0' A,;' < K' UA 2B' ,' ?< ; >B=' B' U,0' HB D' BF;' >F' < ' ;AB ?B:' , =',2< D' ;AB' UA<2B' ,?B' < ' ;AB' 02<FB' < ' ;AB' B ,:' ' ,' = ,D< ,2' = B?; < ' ;<U, =0' ;0' H<;;< :' H@' ;AB' B B @' ,0?B = D' ,F =2@' ' 0>??B00 EB' ?<2> 0:' < B=' < ' , ' ,;;,? ' >F< ' ,' ,00' < ' B ' HB2< D D' ;<' ;AB' 2B ;' H,;;,2 < ' < ' ;AB' ;A' , =' ;AB' 5;A' +< ;>D>B0B:' UA<:' A,E D' HBB ' 0BEB B2@' F B00B=:' A,=' D EB ' U,@:' , =' UB B' ,F =2@' B; D' ' ?< F2B;B' ?< >0 < ' , =' = 0< =B 6' AB' B B @' A,=' = 0FB 0B=' < ' = EB ' < ' BEB @;A D' <FF<0B=' ;<' A V U,0' ' F<00B00 < ' < ' ;AB' <? @' B B ?B' < ' ;AB' B ,68' ' BU' < ' A 0' ' 33%: (' UB B' BEB ' < ' ;AB' >FFB ' B=DB' < ' ;AB' B, ' 02<FB6

%B ;A:' B,2 R D' ;A,;' ;AB B' U,0' 0; 22' ; B' ;<' 0,EB' ;AB' F<0 ; < ' V < ' < 2@' ;AB' AB,=' < ' ;AB' " B ?A' ?<2> ' A,=' ? <U B=' ;AB' <? @' <22: V =BF2<@B=' A 0' 2B,= D' H,;;,2 < :' ;AB' 5;A:' ,? <00' ;AB' 0> ;' < ' ;AB' F2,;B,>:' UA 2B' 0B = D' < ' A 0' 0B?< =:' ;AB' ;A:' ;<' DB;' HB;UBB ' ;AB' B B @' , =' ;AB' BEB 0B' 02<FB' < ' ;AB' F<0 ; < 6' A 0' 2,0;' <EB' ;> B=' <>;' ;<' HB' > ;2B00:' < ' ;AB' B, ' ,?B' < ' ;AB' <22' 0' 0< 0;BBF' , =' 0<' ;A ? 2@' ?<EB B=' U ;A' 2, DB' H<>2=B 0

>;;<' IHB2< D D' ;<' 1,K< (B B ,2' + ?;< 80' = E 0 < J' ;<' <EB' >F' ;<' ;AB' 0>FF< ;' < ' (B B ,2' + ?;< 80' = E 0 < :8' , =' ,D, :' !' B' I(B B ,2' %B ;AJ' < =B B=' ;AB' ;A' , =' 5;A' +< ;>D>B0B' ;<' 0>FF< ;' ;AB' F< ;' ,;;,? B=:' , =' UAB B' ;AB' B B @' UB B' ,0;' D, D' D <> =68' #,?A' DB B ,2' 0FB, 0',0' ' AB' A,=' HBB ' ' ?< , =:' , =' ' B, ' ;A,;' B,?A' 0' >0 D' > =>B' B; ?B ?B' ,0' ;<' ;AB' <;AB 80' =< DO6' BB' <;B' ,;' ;2 B' B =' < ' ;A 0' ?A,F;B 6

'),F B ' ?,220' ;' ,' ' F B? F ?B:8' H>;' ;A 0' 0' <;' ;AB' DA;' U< =6' ' <> =' ;A,;' ' ?<>2=' U,2 ' BB2@' ,H<>;' < ' ;:' H>;' <' < B=' H<=@' < ' B ' ?<>2=' A,EB' F,00B=' >F' ;AB' 02<FB6

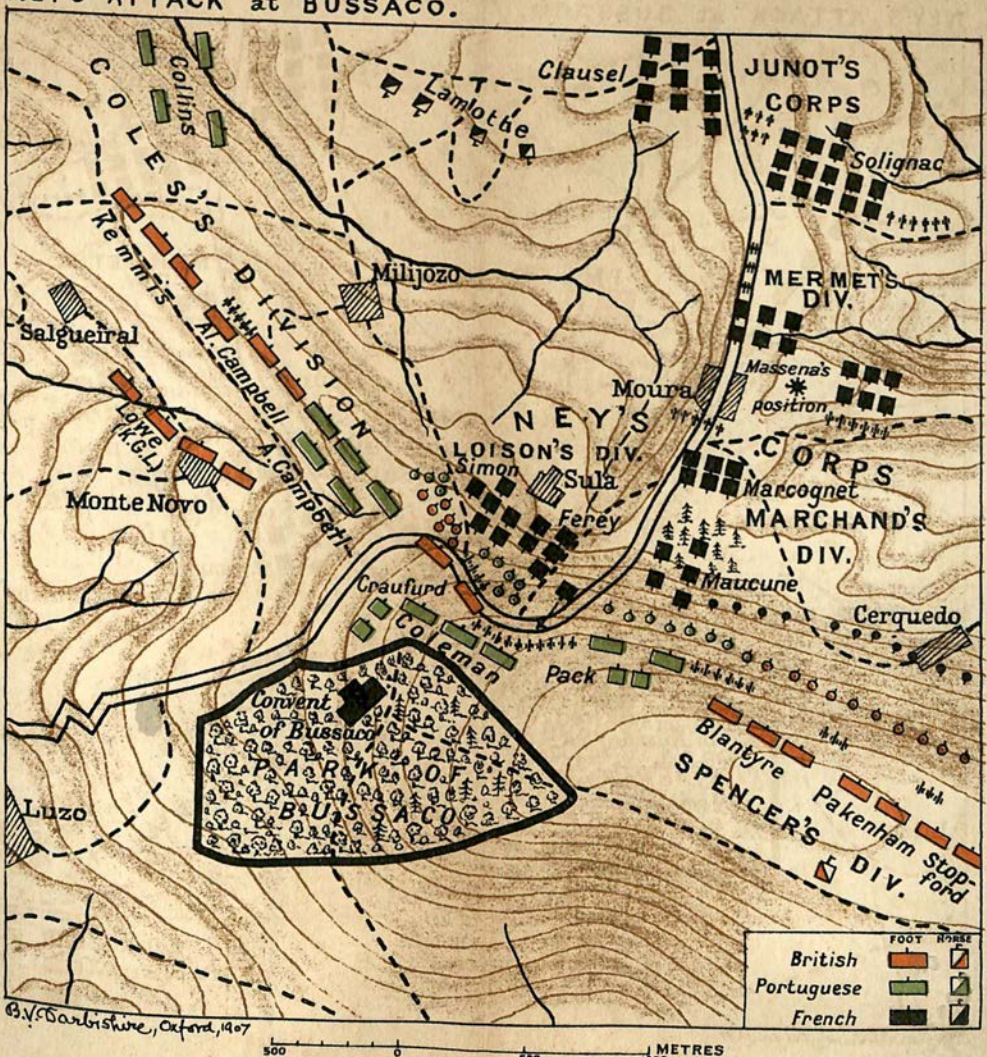
;A , ;' ;AB' ;A' U,0' > ,H2B' ;<' ?2 H' ;:' , ='?, B' H,? ' ;<' ,22' ' < ' ;AB' DA;' < ';AB' 5;A6' $>;' HB < B' ;'?<>2='DB;' H,? :' ;AB' 0B < ' BD B ;' A, =' =< B' ;0' U< 6' %B ;A' A, ='2B=' ;' = ,D< ,22@' ,? <00' ;AB' F2, ;B, >:' 0<' ,0' ;<' F2, ?B' ;' ,2< D' ;AB' 2, ' < ' ;AB' 2B, = D' H, ; ; , 2 < 0' < ' "<@80' ?<2> :' < 'UA ?A' ;AB' 0;' U,0' <U' B 0?< ?B=' < ' ;AB' 0> ;' < ' ;AB' AB DA;0:' UA 2B' ;AB' <;AB 0' UB B' 0; >DD2 D' >F' ;<'N< ' ;6' AB' 5;A' <FB B=' U ;A' ,' E<22B@' , ;' ' @, =0:' , =' ;AB ' ,=E, ?B=' D:' B?B E D' A, =2@' @' B;> ' < ' ;AB' B B @:' UA<' 0BB B=' B ; B2@' = 0?< ?B ;B=' H@' ;AB' ,FFB, , ?B' < ' ,' BU' < ?B' F, ,22B2' ;A' ;0' 2, 6' ;' ;UB ;@' @, =0' < ' ;AB' " B ?A:' ;AB' 5;A' 2<UB B=' ;0' H,@< B;0' , =' F BF, B=' ;<' ?A, DB:' %B ;A' = D' , ;' ;0' AB, =' U,E D' A 0' F2> B=' A, ;6' AB ' ;AB' B B @' D,EB' U,@6' K' 1 @' AB < ?' ?<2> :8' U ;B0' "<@:' K' >?A' = 0AB=' => D' ;AB' ,0?B ;:' B,?AB=' ;AB' 0> ;' < ' ;AB' F2, ;B, >:' UA ?A' U,0' ?<EB B=' U ;A' A<0; 2B' ; <<F06' A<0B' < ' <> ' 2B ;' ,=B' ,' 2, ' <EB B ;', ='0 ,0AB=' >0' >F' H@' ;AB ' H, ; ; , 2 < 'E<22B@07' B, UA 2B' ;A<0B' < ' <> ' < ;:' ?<EB B=' H@' 0< B' <? 0:' UB B' > =B D' >0' U ;A' F> ;@6' AB' AB, =' < ' @' ?<2> ' B22' H,? ' ;<' ;0' DA;:' =B0F ;B' @' B < ;07' '?<>2=' <;' DB;' ;AB ' ;<' =BF2<@:' = 0< =B ' 0B;' :' , =' ;AB' 4;A' , =' 4 ;A' ,?B=' =<U Y A 22' ' AB, =2< D' 2 DA;6' AB' B B @' F> 0>B=' >0' A, 2 U, @' ;<' ;AB' <<;' < ' ;AB' AB DA;0:' ; 22' AB' F>22B=' >F' < ' ?< D' > =B ' B B?; EB' B' < ' <> ' , ; 22B @

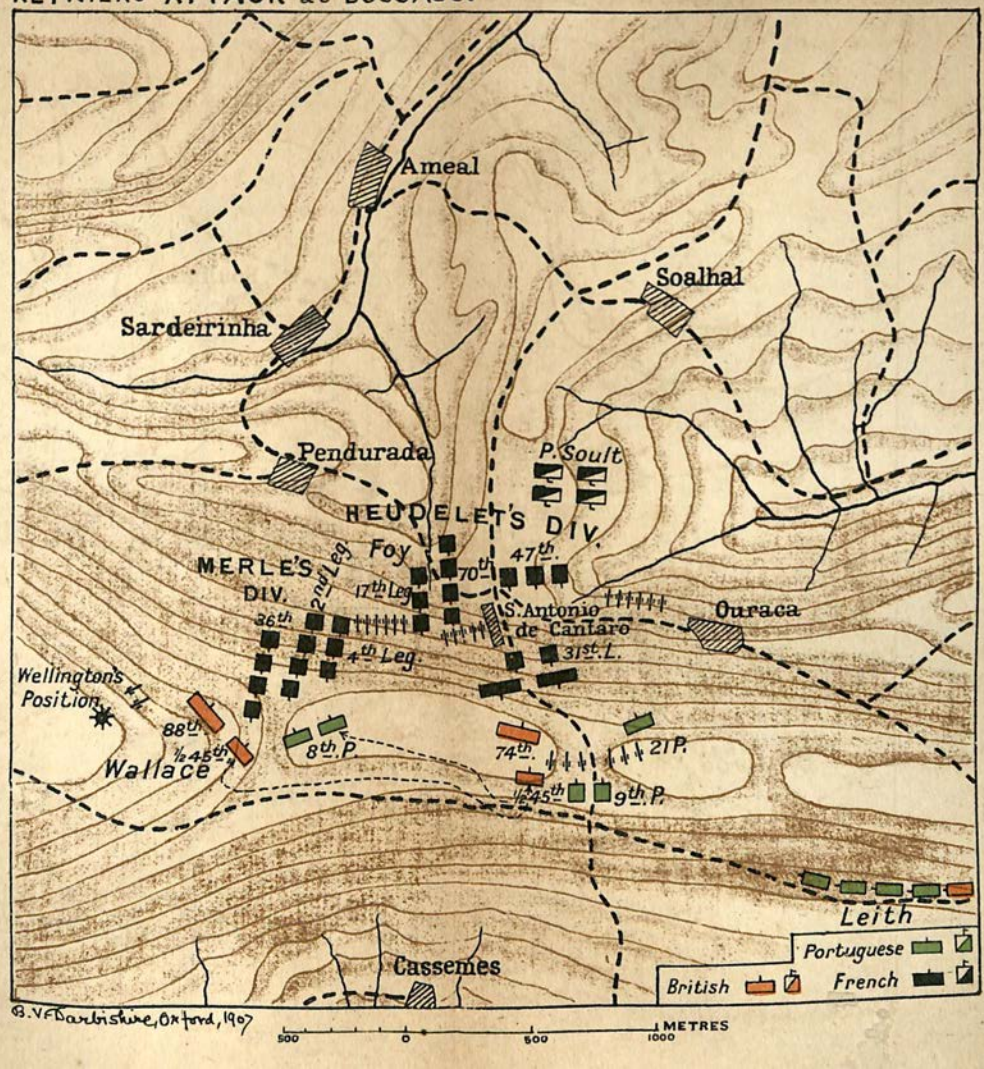
AB' H, ; ;2B' U,0' <U' <EB ' < ' ;A 0' 0 =B6' B@ B ' A, =' ' B0B EB' < 2@' < B' BD B ;:' ;AB' O4;A' < ' ;AB' % B6' 0' <;AB ' ;UB ;@ ' ;U<' H, ; ; , 2 < 0' A, =' ,22' HBB ' HB, ;B ' ;<' F B?B07' ;AB@' A, =' 2<0;' <EB ' : ' B :' ??>= D' < B' ;A, ' A, 2 ';AB ' 0>FB < ' < ?B 06' 1B 2B' ?< , = D' ;AB' 0;' * E 0 < ' U,0' U<> =B=:' A 0' N> < ' H D, = B ' (, =< DB' U,0' 22B=7' "<@:' ?< , = D' ;AB' 0;' H D, =B' < ' ;AB' <;AB ' = E 0 < :' U,0' U<> =B=6' ' ;AB' 0 W' ?<2< B20' UA<' A, =' D< B' >F' ;AB' AB DA;0:' ;A<0B' < ' ;AB' 0;' %BDB :' ='%BDB :' O;A' %BDB :' , =' 4 ;A' A, =' HBB ' A ;6 < ' ;AB' ;UB ;@ ;A BB' H, ; ; , 2 < ' ?< , =B 0' <> ' UB B' 22B=:' 0BEB ' U<> =B=6' ' O ' < ?B 0' ' , 22' UA<' UB ;' ;<' , ?; < :' V < B' ;A, ' < B' ' <> V A, =' HBB ' = 0, H2B=6' ';AB' : ' ?, 0>, 2; B0:' ' B ', =' ;BB ' < ?B 0' UB B' F 0< B 0' ' ;AB' A, =0' < ' ;AB' $; 0A6' =' ;AB0B' 2<00B0

T "<@80' = , @:' FF6' O:' ; ,22 B0' BW, ?;2@' U ;A' %B ;A80' , , ; EB' ' M%33 5' ' 9:))3% ' 5' 1 () ' #%(' E 6' P4 :' , =' , B < 80' 2B; ;B ' ') , F B :' FFB = W ;<' E<26' E 6

=BBF , =0;BBF ,E B< UA ?A UB A,EB A,= <??,0 < ;< 0FB, 6 AB D <> = < ;< ;AB &P0 EB @= B B ;6 1, ?A, = A,= ;< ,=E, ?B: H@ ,;AB DB ;2B 02<FB0: ,2< D ;AB # :(('% UA ?A ?> EB0 >F ;<U, =0 ;AB ?< EB ;< $>00,?<6 %< 0< A,= ;< D< >F ,A 220 =B< ,EB @= B B ;0< ;: UA<0B 2<UB 0; B;?A: ,0 , ,0 ;AB E 22,DB< >2,: 0 DB ;2B: , = >?A ?>;>F H@ U<<=0 , = < ?A, =0: H>;UA<0B >FFB A,2 : HB@< = >2,: 0 BW; B B2@ 0;BBF , = ,H0<2>;B2@ =B0; ;>;B< ?<EB 6 AB B U,0 < <,= AB B:< 2@ , <>DA >2B ; ,? 6

%< 0< 0;, ;B= ,BU >;B0 HB < B 1, ?A, =6 AB A,= A 0 ;U< H D,=B0 0 =B H@ 0 =B: < 80 I0 W H,;;,2 < 0J < ;AB DA;: "B B@80 I,20< 0 W H,;;,2 < 0J < ;AB 2B ;6 $<;A 0;, ;B= < ;AB 2<U D <> = < ;< ;2,: B,?A U ;A ,0; < D ?A, < '' 33%: (?<EB D , ,=E, ?B 0B B= H,;;,2 < ?<2> 07 ;AB P;A BD B ;U,0 ;AB 2B,= D BD B ; < 80: ;AB PP;A "B B@80 H D,=B6 2B,E D ;AB H<;;< :, =,=E, ? D, < D ;AB ; BB0 < ;AB 2<UB 02<FB: H<;A H D,=B0 <> = ;AB '' 33%: (,; < ?B ?AB? B= H@ ,EB @ 0; < D 0 0A D 2 B6 +,? A,= 0F B,= <>;;AB UA<2B < ;AB O;A , ,=< B0 < ;AB A 220 =B < ;< ;< A 0 2 B H,;;,2 < 06 ,> > = A,= ;A <U <>;;AB 5 ;A V < B;A, 4 2B0 V, = ;AB = ,a ,=< B0 V P 2B0 < B V ;< ;AB B ??<0> B0 < ;< >2,6 AB O =, = =: U ;A ;AB 0; , ,=< B0: UB B 2@ D =<U ;AB A<22<U <,= ,; ;AB AB,= < ;AB 0;BBF 02<FB ,H<EB ;A,; E 22,DB: ?< F2B;B2@ ?< ?B,2B= < 0 DA;6 < B=; <<F0: %< 0< ?<>2= < 2@ 0BB ;AB 0;* E 0 < , ,H<EB A < ;AB 2B ;< ;AB A DAB0;F2,;B,> < ;AB B ,: , = <2B , ,U,@ ;< A 0 DA; < ;AB 2<UB A 22Y 0 =B0 ;<U, =0 +, ,=,06 < =B ;< F B00 ;AB <H0; ,;B 2 DA; ; <<F0 < ;< A :%< 0< U,0 ?< FB22B= ;< F>0A < U, = UA<2B H,;;,2 < 0 < A 0 DA; D 2 B6 H@ ,0; B ><>0 >0B < ;AB0B: ;AB , ,=< B0 , = 2B0 UB B BE ?;B= 0; < ;AB 2<UB 02<FB0: ;AB < ;AB E 22,DB< >2,6 $>; UAB ;AB 2,;;B A,= HBB ?,F;> B=: ;AB " B ?A <> = ;AB 0B2EB0 > =B ,AB,E@ B < , ; 22B @6 <00 80 D> 0 < ;AB <22 ,H<EB: HB;UBB ;AB B H,0> B0 < 8<? : HB D ?, B >22@ ; , B= >F< ;AB BW ;0 < ;AB E 22,DB: UA 2B 2BBEB0 (B , H,;;B @ N< B= < ;0 F<0 ; < ,; ;AB AB,= < ;AB ,E B: , = ;<< "B B@ 2, 6 ; U,0 F<00 H2B ;< A,2; >2,: , = %< 0< < =B B= A 0 H D,= B 0 ;< F>0A < U, = ;AB ,;;,? < ?B < B: ;, D <00 80 D> 0 , =


NEY'S ATTACK at BUSSACO.
COLE'S DIVISION
Collins
Lamotte
Clausel
JUNOT'S CORPS
Solignac
Remmis
Al. Campbell
A. Campbell
Milijozo
MERMET'S DIV.
Salgueiral
Massena's position
Moura
NEY'S CORPS
LOISON'S DIV.
Simon
Sula
Lowe (K.G.L.)
Monte Novo
Ferey
Marcognet
MARCHAND'S DIV.
Maucune
Craufurd
Cerquedo
Coleman
Pack
Convent of Bussaco
PARK OF BUSSACO
Blantyre
Pakenham
Stopford
SPENCER'S DIV.
Luzo
British
Portuguese
French
FOOT
HORSE
B.V. Darbishire, Oxford, 1907
500
0
500
1000
METRES


REYNIER'S ATTACK at BUSSACO.
Ameal
Soalhal
Sardeirinha
Pendurada
P. Soult
HEUDELET'S DIV.
Foy
70th
47th.
MERLE'S DIV.
2nd Leg.
17th Leg.
36th
4th Leg.
S. Antonio de Cantaro
31st L.
Ouraca
Wellington's Position
88th
1/45th
Wallace
8th P.
74th.
21P.
1/45th
9th P.
Leith
Cassemes
Portuguese
British
French
B. V. Darbishire, Oxford, 1907
500
0
500
1000
METRES

L ' *' # + ' % # ' %)

=@ D6 AB' ?B ; B' , =' B, ' 0;<<=' ,FF,22B=' < ' < B' < B ;7'
;AB ' 1 ,N< ' H>;A <;' UABB2B=' ' ;A BB' ?< F, B0' < ';AB' ='
>F< ' ;AB' DA;' 2, ' < ' < 80' 2B,= D' BD B ;:' UA 2B' %2<@=' < ';AB' O ='= ='; AB' 0, B' >F< ' ;AB' BW; B B' 2B ;:' 0<' ,0' ;<' F <=>?B' ,' 0B ? ?2B' < ' TB86 ;' U,0' F<00 H2B' ;<' 0;, ='> =B ' ;:' , ='
;AB' " B ?A' H < B' , =' UB ;' A> ;2 D' =<U ' ;AB' A 22:' ;AB' U B? 0' < ';AB' < ;' H, ;;,2 < 0' ?, @ D' ;AB' B, ' < B0' ,U,@' U ;A' ;AB 6'
<' 0;BBF' U,0' ;AB' 02<FB' < ' ;AB ' 2B ;' ;A, ;' 0< B', B' 0, =' ;<' A,EB'
2<0;' ;AB ' <<; D', =' ;<' A,EB' <22B=' =<U ' ;<' ;AB' H<;;< ' < ';AB'
,E B' HB < B' ;AB@' ?<>2=' 0;<F6 AB' % DA;' * E 0 < ' <22<UB=' ,0'
, ' ,0' >2,:' , =' HB@< =:' <;' 0;<FF D' ; 22' %< 0< 80' FB<F2B' A,=';, B ' B >DB' ' ;AB' U<<=B=' D <> =' HB@< =' ;A, ;' E 22, DB:' , ='
;AB' " B ?A' D> 0' H@' 1 <> ,' A,=' HBD> ' ;<' F2, @' >F< ' ;AB '
F> 0>B 06 AB' >0A' A,=' ?, B=' ,U,@' ;AB' UA<2B' < ' ;AB' B B @:'
0,EB' < B' H, ;;,2 < ' >F< ' "B B@80' BW; B B' 2B ;:' UA ?A' A,=' <EB='
0<' , ' =<U ' ' ;AB' 02<FB' < ' ;AB' ,E B' ;A, ;' ;' A,=' HB?< B'
0BF, ,;B=' < ' ;AB' B0;6 A 0' 0<2 ;, @' ?<2> :' F B00 D' < U, =:'
?, B' ;<' ;AB' 0 @2 B' <;' ' < ;' < ' ,> > =:' H>;' ,;' ;AB' EB @'
AB,=' < ' ;AB' ,E B:' HB2<U' 2BBEB0' H,;;B @6 B B' ;' U,0' =B,2;'
U ;A' H@' ;AB' 2B,= D' > ;' < ' <2B , 80' +< ;>D>B0B' H D,=B:'
UA ?A' U,0' 0;, = D' ' 2 B' B, ' ;AB' # :((%%' AB' 0T' H,;;,2 < '
< ';AB' 5;A' BD B ;:' > =B ' 1 ,N< ' 1 ?$B, :' ?A, DB=' ;' , =' <22B='
;' H,? ' ;<' ;AB' ?2B ;:' =<U ' UA<0B' H<;;< ' ;' A,0; 2@' B?< 2B=:'
, =' N< B=' ;AB' B0;' < ' ;AB' 2@ D' = E 0 < 6

8' ' F,00,DB' < ') ,F B 80' ,??<> ;' < ' ;AB' <EB B ;0' < ' ;AB' % DA;' * E '
0 < ' I 6 4J' A,0' F>RR2B=' , @' B,=B 06 !' # DA;BB ' A> = B=' $; 0A'
H,@< B;0' UB ;' 0F, 2 D' <EB ' ;AB' H <U' < ' ;AB' A 226 ! B;' 0<' A, =@' UB B' ;2 B'
2B,= D' " B ?A' ;A,;' BEB @' , ' < ' ;AB' 0;' 0B?; < ' , 0B=' A 0' >0 B;:' , ='
;U<' < ?B 0' , =' ;B ' 0<2= B 0' I< ';AB' =J' B22' HB < B' ;AB 6) <;' ,' " B ?AY
, ' 2 ,=' 00B=' A 0' , Q8 A 0' F,00,DB' 2<< 0' ,0' ' ;AB' UA<2B' " B ?A'
= E 0 < ' A,=' HBB ' ?< ?B EB=' H@') ,F B ',0' <E D' ' ,' 0 D2B' ?<2> ' U ;A'
,' < ;' < ' < 2@' ;UB2EB' B 6 ' B@B U ; B00 6 ' C<A ' $B22:' < ';AB' =:'
UA<' <U B=' ;AB' ?<F@' < ';AB' H<< ' UA ?A' ' <U' A,EB' HB < B' B:' A,0' U ;;B '
$<0A' ' ;AB' , D ' ,D, 0;' ;AB' U< =06 ' ?<> 0B' ;AB' B B @' U,0'
,=E, ? D' U ;A' B,?A' H,;;,2 < ' ' ?<2> ' < ' ?< F, B0:' U ;A' ,' < ;' < '
;A ;@' ,;' 2B,0;6 2 ! 2 ,;') ,F B ' 0BB 0' ;<' A,EB' A,=' ' A 0' AB,=' U,0' , '
, B?=<;B';<2=' H@' A 0' H <;AB ' (B< DB' S@ : ' = 5)#;' F6 O J6 K 1@' ?< F, @'
B;' ;AB' EB @' AB,=' < ' ;AB' " B ?A' ?<2> :' , =' B= ,;B2@ ?,22 D' ;<' @'
B ' ;<' < ' ?<2> ' < ' 0B?; < 0:' ' < =B ' ;<' D EB' < B' < ?B' ;<' <> ' >0A:'
UB' =,0AB=' < U, =6 ' U,0' ' < ;' < ' @' B ' ,' @, =' < ' ;U<:' UAB ' ,'
" B ?A , ' ,=B ,' F2> DB' ,;' B' U ;A' A 0' H,@< B;:' , =' ,;' ;AB' 0, B' ; B

1,00B ,'0; 22' A,=' ;' 'A 0' F<UB ';<',;;,? ',D, :' <'1B B;8Ø = E 0 <' <' ;AB' P;A' <F0:' , =' ;AB' UA<2B' <'C> <;8Ø : ' , ; @' A,=' <;' @B;' ,=E, ?B=' , =' A,=' A, =2@' 2<0;' ,' , 6' $>;' ;AB' B0>2;' <'9B@8Ø, =' B@ ? 8ØB <;Ø'A,=' HBB '0<' = 0AB, ;B D' ;A,;';AB' 1, 0A,2' B >0B=' ;<' U,0;B' <B'2 EBØ'<'UA,;'U,Ø'?2B, 2@' ,' A<FB2B0Ø' B ;B F 0B6 B' ?<>2=' <U' 0BB' & B22 D;< 8Ø , @' ?< ?B ; ,;B=' <' ;AB';U<'F< ;Ø';A,;'A,=' HBB ' ,;;,? B=6 228Ø AB,E@' ?<2> ' <' : ' B ' A,=' <U' 2 B=' ;AB' AB DA;Ø'<' %B ;A8Ø DA;6 <2B' A,=' B=DB=' ;AB' O;A' * E 0 <' ??<0B' ';<' ,>> =8Ø 2B ;:' , =' <2B , ' , =' ;AB' (B , Ø' UB B' E 0 H2B' ' ;AB' B, 6 '1,00B ,'A,=' 0; 22' : ' B0A' , ; @:';AB'# D2 0A' DB B ,2' A,=' : 'UA<'A,=' <;' @B;'?< B'>F' ;<';AB' DA; DY 2 B6 ;' U,Ø' >0B2B0Ø';<' FB 0 0;6 ??< = D2@:';AB' 0 0A D' ,2< D' 9B@8Ø < ;' U,Ø' ,22<UB=' ;<' = B' =<U ' ' ;AB' , ;B << :' , =' ;AB' " B ?A' = E 0 < Ø' B; B=' ;<';AB '?, F06

AB' ;<;,2' 2<00' <' & B22 D;< 8Ø , @' A,=' HBB ' : '< ?B Ø' , =' B :'<'UA< ' 'UB B' 22B=:' : 'U<> =B=:', =' ;@ < B' 00 D6 9<'< ?B '<EB ';AB' , '<',' ,N<'A,=' HBB ' 22B=' 7' , =' ;AB' < 2@' 0B <' < ?B Ø' U<> =B=' UB B' ;AB' +< ;>D>B0B' H D,=B' A, F2B < =' , =' <2< B2' $, ?2,@'<';AB' =6 ' ;AB'?,0>,2; B0:' P P' UB B' ';AB' , Ø'<';AB'$; 0A:' P P' ';A<0B' <';AB' +< ;>D>B0B' BD B ;0V,'0; , DB'?< ?=B ?B' ';AB'2<00BØ' <';AB' ;U<',22 B=' , B0Ø6 AB' +< ;>D>B0B' 2 B:' =BB=:'A,=' =< B' ;AB ' , 'A,2'<';AB' DA; D:',Ø';AB' B;> '0A<UB=V ' <' 0;, ?B' U ;A'=0? B= ;:' '0< B' U ;A' A DA' B ;6 ';AB' ;A' , =' 5;A' +< ;>D>B0B' A,=' H < B' HB < B' "<@8Ø ,;;,? :' ;' U,Ø' > =B' 0BEB B' 0; B00:' , =' UAB' ,;;,? B=' H@' 0>FB <' > HB 06 ' ;AB' <;AB' A, =:' +,? 8Ø H D,=B:' <2B , 8Ø 5;A:' , =' ;AB' , ,=< B0' <';AB' 6 DA;' * E 0 <' U<' ;AB' A DAB0;' F , 0B0' <' ;AB' ?< , =B 0:' , =' A,=' ;, B' ,' <0;'= 0; D> 0AB=' F, ;' ' ;AB' E ?;< @6 & B22 D;<' <U' BU' BW,?;2@' A<U' , ' ;AB@' ?<>2=' HB' ; >0;B=:' , =' ?<>2=' B0; , ;B' , ;'2,0;' ;AB' B,2' DA; D' E,2>B'<' A Ø' , @V,;'2B,0;:' <' ,'=B B 0 EB' H,;;2B' ' ?A<0B' ', =' ,E<> Y ,H2B' D <> =6 ;' U<>2=' HB' , <;AB' ,;;B' ;<' ?,2?>2,;B' A<U' , ' ;AB' ,22 B=' A<0;' U,Ø' ?,F,H2B'<';, D' ;AB'< B 0 EB6

AB' ;<;,2' 2<00' <';AB' " B ?A:' ,Ø' 0A<U ' H@' ;AB' B;> V UA ?A

?,F;, 'U,Ø';, B'F 0< B VHB D' ;AB'< 2@' $; 0A' < ?B '?,F;> B=' ;A,;' =,@VU ;A'0W' B :', =' ;AB B' UB B' <EB 'O '<;AB '?,0>,2; B0Ø ;<F < =8Ø H D,=B'2<0;';U<' B V %< =' $2, ;@ B8Ø 0BEB 6

U,0 <;' M> ;B' ?< F2B;B V F B0B ;B=' ;<' 1 ,00B ,' < ' ?;<HB ' :' U,0 O:O5 :' < 'UA< ' 'UB B' 22B=:' :P 'U<> =B=:' , =' PO' 00 D' I 6B6' F 0< B 0J6' ;B 'A 0' >0>,2' ,0A < 'AB' BF B0B ;B=' ;' ;<' ;AB' # FB < ' ,0' HB D' K ,H<>;' : T68' B' DB B ,2' I (, =< DBJ:' ;U<' ?<2< B20:' , =' ;@ ;U<' <;AB ' < ?B 0' A,=' HBB ' 22B=:' <> ' DB B ,20' I 1 ,>?> B:' "<@:' 1 B 2B:' < J' UB B' U<> =B= V ;AB' 2,0;' U,0' ,20<' ,' F 0< B 7' EB' ?<2< B20' , =' 5' <;AB ' < ?B 0' UB B' U<> =B=6' AB' =' < F0' ' ,22' A,=' 2<0;' ,;' 2B,0;' : O ' < ?B 0' , =' B :' ;AB' P;A' < F0' ,;' 2B,0;' :O ' ;' ,@' HB' B B HB B=' ;A,;' < ' ,22' ;AB' H,;;2BO' ' ;AB' +B 0>2,' & , ' ;A 0' U,0' ;AB' < B' ' UA ?A' ;AB' F <F< ; < ' < ' < ?B 0' ;<' B ' A ;' < ' ;AB' " B ?A' 0 =B' U,0' A DAB0;' < B' ;<' 0 W;BB V ;AB' ,EB ,DB' HB D' < B' ;<' ;UB ;@ ;U<' ' < = , @' B D,DB B ;O6' 2 B' BW?B00 EB' F <F< ; < ' < ' ?,0>,2; BO' ' ;AB' ?< 00 < B=' , 0' HB, 0' U ; B00' ;<' ,' =B0FB ,;B' ,;;B F;' ;<' 2B,=' < ' ;AB' B ' ;<' , ' F<00 H2B' ;,0 :' ' UA ?A' ;AB' < ?B 0' 0,? ?B=' ;AB 0B2EBO' ' ;AB' <0;' 0F2B = =' 0;@2B6

1 ,00B ,' >0;' <;' HB' ;<<' >?A' H2, B=' < ' A 0' BWFB B ;6' B' A,=' 0; 22' ;<' ,0?B ;, ' ;AB' DA; D' E,2>B' < ' & B22 D;< 8O' , @V , =' B0; ,;B=' ;' ;<<' 2<U:' HB?,>0B' < ';AB' BW; B B' F >=B ?B' UA ?A' A 0' ,=EB 0, @' A,=' A ;AB ;<' = 0F2,@B=6' B' U,0' A, = ?,FFB=' H@' ;AB' F<00 H 2 ;@' < ' >0 D' A 0' , ; 22B @' B B?; EB2@:' , =' ;AB' F<0 ; < ' ' < ;' < ' A ' U,0' 0; < DV BEB ' 0; < DB ' ;A, ' AB' D>B00B=:' HB?,>0B' < ' ;AB' <,=' < ' ?< > ?,; < ' ,2< D' ;AB' B, ' < ';AB' F2,;B,>V H>;' <;' ;<<' 0; < D' ;<' HB' < ?B=:' ';AB' =B B =B 0' = =' <;' DA;' UB226' 1 < B<EB :' ;' U,0' B 0B2@' 2< DV B' 2BO' = ' B =' ;<' B =:' 0<' ;A,;' ;U<' H2<U0' =B2 EB B=' U ;A' ,' ?< F0

8' A 0' ;<<' ' ,' = 0F,;?A' ;<' $B ;2>B ' =,;B=' < H ,:' ?;6' O:' ;A BB' =,@0' , ;B ' ;AB' B;> 0' A,=' HBB ' F2,?B=' HB < B' 2 6

' "< ' ;AB0B' B;> 0:' 0BB' FFB = W:' <6' W 6' 2 B@' , B' ?B , 2@' ?< Y F2B;B:' < ;; D' I J' 2<00BO' < ' ;AB' ?,E,2 @' < ' ;AB' =' < F0' IUAB B' 1 , ; B 8O' E,2>,H2B' ;,H2BO' 0A<U' ;A,;' ;A BB' < ?B 0' UB B' U<> =B=J:' I J' 2<00BO' < ' ;AB' ;A' < F0:' UA ?A' ?,>DA;' ,' BU' 0AB220' ,0' ;' 0;<<=' < ' ;AB' AB DA;0' H@' 1<> ,' , =' A,=' I,0' ,D, ' 0A<U ' H@' 1 , ; B 8O' ; ,H2BOJ' 0 W < ?B 0' A ;:' UA ?A' >0;' F2@' 0< B' A> = B=' B 6' I J' < B' ?,0>,2; BO' ';AB' , ; @' < ;;B=' ';AB' B;> 0:' < ' UA 2B' ;AB' BF< ;' ,??<> ;0' < ' P ' 22B=' , =' U<> =B=' < ?B 0:' 1 , ; B ' , BO' 4 6' * B=>?; D' ;AB' ?,E,2 @' , =' ;A' < F0' 2<00BO' B ; < B=' ,H<EB:' ;AB B' , B' 0; 22' ;BB ' < ?B 0' I, =' ;AB B < B' F B0> ,H2@' ' B J' ;<<' BU' D EB ' ';AB' BF< ;0' 0B ;' ';< 1 ,00= ,' 7' B6D6' < ';AB' =' %B DB ' ;AB' BF< ;' A,0' B DA;BB ' < ?B 0' A ;:' 1 , ; B ' D EBO' ;AB' , BO' < ';UB ;@ ;U<6

B,?A' ';AB'?B ; B' DA;' A,EB'F B ?B=';AB'2 B'HB< B';AB'B B @8Ø = 0;, ;' B0B EBØ' ?<>2=' DB;' >F6' ",E<> B=' H@';AB' <D V ,Ø' UB' A,EB' 0BB V B@ B ',?;>,22@' U<' ';AB' AB DA;Ø' <',' < B ;:' ;A<>DA') B@' BEB 'D<;' B,';AB'? B0;6' AB' 0;, B'2,@' <;'0< >?A' ', D';AB';,2',Ø' '> =B ,; D';AB'U,2 B'B ?B ?@' <';AB'B B @6' ; < BØ'2 B' &,22,?B8Ø'?A, DB'U ;A';AB'O ;A', =' ;A:'<' ,> > =8Ø' ,0;B 2@',=E, ?B' U ;A';AB'O =', =' =:' , B'HB@< =';AB'?< <'BWFB B ?BØ'<'U, 6' 1,00B ,'F>;' < ;@' EB'H,;;,2 < 0'';<'A Ø' DA; D 2 BV;AB@' EB B' BF>20B=' @' ;UB ;@ <> :' <';A,;' U,Ø';AB' > HB'<' D2< +< ;>D>B0B' H,;;,2 < Ø' UA ?A' B D,DB=' < B';A,';AB'2 DA;?< F, B0 6' A Ø'?<>2=' <;' A,EB' HBB'< B0BB 6' $>;' ;AB'2B00<'U,Ø'2B, ;:' $B < B';AB'2 BØ'<' < B0' .B= ,0:' ,'< ; DA;'2,;B :' 1,00B ,' B >0B=';<';, B', @' < B' 0 Ø'<';AB' =:', =';AB'?, F, D' ,00> B=',' EB @' = B B ;' ?A, ,?;B :' HB?,>0B' ;AB' E,=B' A,=' 2B, ;' ;<' B0FB?;' A Ø' B B @6

Ť . R6' ,22' B@ B 8Ø' < F0:' 0,EB' ;AB' O4;A:' ;UB ;@ ;U<' H,;;,2 < Ø' 1 1, ?A, =' B2BEB' H,;;,2 < 0:' %< 0<';UB2EB' H,;;,2 < 0V;<;,2' P:' B 6' BB' ,H2BØ' ' FFB = W6

Ť . R6';AB'H D,=BØ'<'1,? <', =' A, F2B < =' <';AB' =' * E 0 <'G ;2 B' 0;:' 5;A:' ;A:' $; 0A:', =';AB' ;2' +< ;>D>B0B'<' %B ;A:' ,> > =8Ø' EB'H,;;,2 < 06' +,? 8Ø' EB'H,;;,2 < 0:';A BB'H,;;,2 < Ø'<' <2B , V;<;,2' O:' B 6' BB' ,H2BØ' ' FFB = W6

I J') #')' #' + (+ !' "' $'

' 0FB ;';U<' =,@Ø' ' F 2' 5 Ø', =';U<' =,@Ø' ' F 2' 5 P' 'D< D' EB @',?, B >22@'<EB' ';AB' B2=V0,EB';A,;'<' ;Ø' B 2B'2B D;A' '= =' <;' EB0; D,;B' ?2<0B2@' B ;AB' <2B8Ø' F<0 ; <'<';AB'BW; B B' < ;A:'<' 228Ø' <';AB'BW; B B'0<>;A:' <' DA; D'A,E D'?< B', 'B ;AB'<' ';AB 6' AB' D <> =' Ø'0<' >;B2@'=B0? HB=' ';AB'F B?B= D'?A,F;B';A,;'< 2@',' BU' ,== ; < ,2'F< ;0' BM> B' <; ?B6

I J' AB',E B'UA ?A'2,@' HB;UBB' +,?', =' ,> > =:', =' HB;UBB' 1,?A, =', =' %< 0< :' Ø',' B,;> B'UA ?A' <' ,F' ?, ' F <FB 2@' BWF B00:', =' UA ?A' <'< B'UA<' A,Ø' <;' D< B' EB @',?, B >22@'<EB' ';AB' A 220 =B'?, ' >22@' F ?;> B' ;<' A 0B2 6' ;' F <=>?BØ', ' ,H0<2>;B' U, ;' <' ?< ; > ;@' HB;UBB' ';AB';U<' DA;Ø'UA ?A' EB ;'<' ;<' ;Ø' DA;', =' 2B ;6

I J' AB' 1< =BD<' Ø' <;' E 0 H2B' < ', @' F< ;'<' ;AB'2 B'<' AB DA;Ø' ; 22' 228Ø' F<0 ; <' Ø' B,?AB=6' ;' Ø' 0> ' ,' HB2<U' ;AB' 2BEB2' <' ;AB' >F2, =6

I J' AB' , ' ;< < +,2AB <Ø' <,=' Ø',' B B' ?<> ; @' ; ,? :' H, B2@

=B0B E D' ;AB' , B' < ' <, =:' ;A<>DA' F ,?; ?, H2B' < ' , ; 22B @' , =' EBA ??2B0 AB' # :(6%% 1<> , $>060, ?<' 0' ,' A DA <, =' < ' ;AB' 0;' ?2, 00:' , = , H2@' B D BB B=:' B' F, ;A0' ,? <00' ;AB' B ,' , ;' 2280' B =' < ' ;' , B' U B;?AB=' >2B ; ,? 0:' <;' 0> ; , H2B' < ' UABB2B=' ; , ?6 <' 0' ;AB' ; ,? ' < ' >2, ' >F' ;AB' 02<FB' ;<' , > > =80' 0; , = D F2, ?B6

IOJ' 2 B' E BU' < ' ;AB' 0> ;' < ' ;AB' B ,' 0' EB @' BW;B 0 EB:' B H ,? D' < ' ;2 B' < B' 0 =B' , 22' ;AB' 02<FB0' < ' ;AB' #0; B22, ' ,0' , ' ,0' (>, =, :' , =' < ' ;AB' <;AB ' ;AB' UA<2B' ?<, 0; F2, ' < ' < H ,' ,0' , ' ,0' ;AB' 0B, 6' $>;' ' B, ?A' = B?; < ' ;AB B' 0' 0< >?A' U<<=' , =' A 22' ;A, ;' , @' <, =0' , =' E 22, DB0' , B' ,0 B=:' 2 B' " B ?A' , @:' H<;A' ' ,=E, ?B' , =' B; B, ;:' U,0' < 2@' ;B Y ;;B ;2@' E 0 H2B6 $>;' B <>DA' ?<>2=' HB' ,=B' <>;' ;<' =B;B B' ;0' DB B ,2' <EB B ;0' U ;A' , ' F B? 0 < 6 1 B ' ;' B, ?AB=' ;AB' <<; A 220' HB < B' ;AB' B ,' BEB @' =B; , 2' < ' ;0' = 0F<0 ; < ' ?<>2=' HB' <22<UB=' H@' , ' <H0B EB ' < ' , @' F, ;' < ' ;AB' ? B0;:' 60, EB' ;A, ;' HB2<U' >2, ' U<<=0' ' ;AB' H<;;< ' A =B' ;AB' 0; , ; D F< ;' < ' %< 0< 80' = E 0 < 6

I J' ' ;AB' ?A, FB2' H@' ;AB' 0 =B' < ' ;2 B' # ((%% ' N>0;' HBA =' ;2 B' 0 @ 2 B' < ' ;AB' # D2 0A' F<0 ; < :' ;AB' ; , EB22B ' U 22' =' ,' 2 ;;2B' >0B> :' ?2>= D' ,' EB @' B' ;<F<D , FA ?, 2' , F:' U ;A' ;AB' F<0 ; < ' < ' ;AB' , 22 B=' ; <<F0:' , =' < B' B0FB? , 22@' < ' ;AB' +< ;>D>B0B' BD B ;0:' UB22' , B=6 AB B' , B' , BU' B < 0' ' ;AB' F2, ? D' < ' ;AB' $; 0A' H, ;;, 2 < 0:' H>;' <;A D' < ' ?< 0BY M>B ?B6 AB' " B ?A' , @' 0' < 2@' E, D>B2@' = ?, ;B=6 $>;' ;AB' , F' 0' , ? B= ;' ;<' ;AB' +< ;>D>B0B' B D BB ' < ?B 0' UA<' ?< F 2B=' ;6

IPJ' 0' ' A, EB' <H0B EB=' ' ;AB' BW;' ?A, F;B :' ;AB' D <> =' ;<' ;AB' < ;A:' , 2< D' ;AB' B ,0' =B' 2?<H, ' , =' =B' , , >2, :' 0' <;' 0<' > < 2@' 2< ;@:' < ' 0<' < H == D' ' ;0' , 0FB?;:' ,0' ;<' ?, >0B' ;AB' <H0B EB ' ;<' =<>H;' UAB;AB ' ;AB B' ?, ' HB' , @' F, 00' , ? <00' ;AB' U, ;B 0AB=' ' ;A, ;' = B?; < 6 =BB=:' ;AB' 0;' =B, ' ;A, ;' 0; B0' ;AB' =' < ' B, ?A D' ;AB' 0> ;' < ' ;AB' B ,:' , =' ?, 0; D' , ' D2, ?B' <> =' ;AB' U =B' 2, =0?, FB:' 0' ;A, ;' ;' 0' 0> F 0 D' ;A, ;' , @' < ?B ' ' ;AB' " B ?A' , @' ?, ' A, EB' HB2 BEB=' ;A, ;' ;AB' , , >2, ' U, 0' , H0<2>;B2@' F ,?; ?, H2B6 1< B<EB ' ;' 0' , ' 2B00' B, 0 2@' =B B 0 H2B' ;A, ' ;AB' $>00, ?<' =DB:' HB?, >0B' ;' 0' >?A' < B' H < B ' , =' >22' < ' ?<EB :' 2 B' HB, >;@' < ' ;AB' $>00, ?<' F<0 ; < ' 0' ;A, ;:' 0, EB' < ' ;AB' 1<> , >2, ' 0F> 0:' ;' 0' B ; B2@' H, B' < ' ?<EB ' < ' ;AB' 0 =B' , ? D' B, 0; U, =6 2 B' 0 <<;A:' 0; BBF' 02<FB:' U ;A' ;0' > RB' , =' AB, ;AB ' , =' ;0' <??, 0 < ,2' <>; ? <F0' < ' <? :' , B0' ,' 0F2B = =' D2, ? 06 2 B' BEB 0B' 0F, ?B' U<>2=' HB' ,' ' U< 0B' F<0 ; < ' ;<' =B B =:' , D, 0;' , ' B B @' ?< D' < ' < H ,' , =' ;AB' ?<, 0; F2, :' HB?, >0B' ;' 0' ;A ? 2@' ;B 0FB 0B=' U ;A' U<<=06

I4J' & ;A' ;AB' F<00 H2B' BW?BF; < ' < ' 0< B' < ' ;AB' +@ B B, ' DA; D' D <> =0:' $>00, ?<' D EB0' ;AB' <0;' HB, >; >2' 2, =0?, FB' < ' , @' < ' ;AB' $; 0A' H, ;;2B B2=0' < ' ;AB' +B 0>2, 6 2H>B ,' 0' ; , B:' ,2, EB ,' 0' < 2@' F ?;> B0M>B' , ;' ;0' < ;AB ' B =:' ,2, , ?,' 0' <22 D' D <> =' U ;A' > ;B B0; D' F2<>DAB=' B2=0:' 0, EB' UAB B' ;AB' ;U<' , F 2B0' ? <F' >F' ' ;AB ' 0<2, ;B=' >DDB= B00 6 "> B ;B0' =8 < <' 0' ,' F B;;@' A 220 =B:' 0>?A' ,0' < B' ,@' 0BB' ' , @' # D2 0A' ?<> ;@:' U ;A' B, =<U' HB2<U' , =' <>DA' F, 0;> B' , H<EB6 . B <' 0' =, FF2B=' D <> =:' U ;A' , @' ; BB0' H>;' <' ?< , = D' B, ;> B6 $>;' ;AB' 2< ; B00:' ;AB' <FB ' H BBR@' , :' ;AB' , B, ?A D' E BU' <EB ' F2, :' U<<=:

<> ;, ', =' = 0;, ;' 0B,:' < ';2 B' 0> ;' < ';AB' $>00,?<' B ,' Ø'> M>B' ';Ø' HB,>;@6 ;' Ø' 0 ,2Ø' U< =B';A,;';AB' <=B ' +< ;>D>B0B' A,EB';> B=' ;' ;<',' AB,2;A B0< ;:' < ';A,;';AB' $; 0A' ?<2< @',;' F< ;<' A,EB' WB=' < ';AB' ?>2 ,; D' F2,;B,>',Ø';AB' HB0;' D<2 ?<> 0B' ';AB' +B 0>2,6

I J') #')' #' ' "' #' $ %#'

"' $ '

. H 2B' ;AB B' Ø' <' F< ;' < ' = 0F>;B' ?< ?B D' ;A,;' F, ;' < ';AB' $,;;2B' < ' $>00,?<' UA ?A' ,> > =' +,? :', =' <2B ,' UB B' B D,DB=',D, 0;';AB' P;A' < F0:';AB B' U,Ø' H ;;B' ?< ; <EB 0@' < ';AB' BW,?;' =B;, 2Ø' < ';AB' BF>20B' < ' B@ B 8Ø' ?< FØ' H@' + ?;< ', =' %B ;A6' + ?;< :', =' <22<U D' A ' A Ø' 0>H< = ,;BØ' < ';AB' =' * E 0 < 7' ;A<>DA;' ;A,;' %B ;A8Ø' F, ;' ';AB',?; < ' U,Ø' 0 D ?, ;:' ;A,;' AB' B B2@' BF>20B=',' < ',;;,? ', ;B';AB', ' 0; >DD2B' U,Ø' <EB 6' %B ;A' , =' A Ø' < ?B Ø' ?< 0 =B B=';A,;';AB@' D,EB';AB' =B? 0 EB' H2<U:';A,;' + ?;< 8Ø' 2 B' U<>2=' A,EB' HBB ' H < B ', =';AB' H,;;2B' FB A,FØ' 2<0;:' ' $, B0Ø' H D,=B' A,=' <;', EB=',;' ;AB' ? ; ?,2' < B ;' , =' 0,EB=';AB' 0 ;>,; < 6' 22' ;A,;' + ?;< ' U<>2=',22<U' U,Ø';A,;' %B ;A' K, =B=';AB' U D' < ';AB' OP;A', =';AB' ;A' +< ;>D>B0B' ' BF>20 D' ;AB' B B @8Ø' 2,0;',;;B F;6' (,;;, :' UA<' U <;B', ', = ,H2B', ,; EB' < ';AB' =B B,;' < ' 1 B 2B8Ø' = E 0 < ' H@';AB' ;A', =';AB' B DAH<> D';<<F0:' =B B=';A,;';AB' =' * E 0 < ' U,Ø' BEB ' F B00B=:' 0,@Ø';A,;' AB' BEB ' 0,Ø' %B ;A8Ø' B ' ; 22';AB',?; < ' U,Ø' <EB :', =' F< ;Ø' <>;';A,;' $, B0Ø' H D,=B:' <>;' < ' : ' H,@< B;0:' 2<0;' H>;' O4' B ',2;<DB;AB :' UA 2B' ;AB' O ;A' BD B ;', 2< B' 2<0;' ;A ?B:', =';AB' ;A' < B';A, ';U ?B:',Ø', @' 22B=', =' U<> =B=' <>;' < ';AB ' 0?, ;@' > HB Ø' I P ', =' Ø' <>;' < ' PP ', =' P45' B0FB?; EB2@J6' ;AB ' =' * E 0 < ' < ?B Ø' 0>DDB0;' I0BB' ;AB' 2B;;B Ø' ';AB' FFB = W' ;<'),F B 8Ø' 0 W;A' E<2> BJ';A,;' %B ;A' <>DA;' < 2@' U ;A' ,' HB2,;B=' H<=@' < ' " B ?A' 0 0AB 0:' < ' U ;A' B ' UA<' A,=' HBB ' ?>;' <2+' < ' ;AB' , ', ;;,? D' ?<2> ' H@' ;AB' 0>??B00 >2',=E, ?B' < ' & ,22,?B6' ';AB' <;AB ' A, =' %B ;A' I0BB' A Ø' 2B;;B ' ' "B22 D;< :' 9:))3% % ' ;' 1#) ' #%(' E<26' E :' F6' P4 J' 0FB, Ø' < ' ?< D' < ';AB' D <> =' ;<' =' ,' 2, DB' " B ?A' ?<2> ' ? <00 D' ;AB' B ,:', =';AB' +< ;>D>B0B' ;A', =' 5;A' H < B :', =' ,H<>;' ;<' B?< 2' =<U ';AB' B, ' 02<FB6' 0', =B =B ?, F:' %B ;A ,@:', =' , B < ' < ';AB' 5;A' HB, ' A ' <>;6

),F B ' A,Ø', 2B=';<' , B' ;AB' 0 ;>,; < ' ??2B, :' < ' <;' 0BB D' ;A,;' ;AB B' UB B' ;U<' ?< F2B;B2@' 0BF, ,;B' ,;;,? Ø' < ';AB' " B ?A:' = E =B=' H@' , ',FF B? ,H2B' ;B E,26' B' ;A Ø' ;A,;' "<@' U,Ø' < ';AB' B ,' ,Ø' 0<< ' ,Ø' 1 B 2B:', =' ?,220' A Ø' ?<2> ' I 6' F6' J' K';AB' " B ?A' H,;;,2 < Ø' UA ?A' A,=' 0;' D, B=';AB' ? B0;:8 UA 2B' ,Ø',' ,;;B' < ' ,?;' ;AB@' A,=' < 2@' 0;, ;B=', ;B' & ,22,?B8Ø' BF>20B' < ' 1 B 2B' U,Ø' 2< D' <EB 6

8 AB' B,2' 0;>,; < ' Ø' ,=B' ?2B,' UAB' B@ B 8Ø', =' B>=B2B;8Ø' = 0Y F,;?ABØ' ';AB' " B ?A' ?A EBØ', =' "<@8Ø' =, @', B' 0;>= B=6' " < ';AB0B' ;' Ø' ?2B,' ;A,;' ;AB B' UB B' 'G' <??,0 < Ø' < ' UA ?A' ;AB' " B ?A' D<;' ;<' ;AB

;<F' < ' ;AB' B ,:' ;AB' 0;' => D' 1 B 2B8Ø ,;;,? :' ;AB' 0B?<>=' => D' "<@8Ø6 ' A,EB' M><;B=' "<@8Ø , ,; EB' < ' F6 44' ,H<EB' 7 H>;' ;' ,@' HB' UB22' ;<' D EB' ,20<' A Ø <;B' 0A<U D' ;AB' 0;, ; D ; B' < ' A Ø ?<2> 6 \' %,' F B B B' = E 0 < ' I 1 B 2BJ' ,' D ,E ' 2,' < ;,D B' ? ' 0B' NB;;, ;' ,' = < ;B6 1 , Ø ,' FB B' 2BØ' ;B;?Ø' , E, B ;' 0> ' ? F2,;B,>:' M>8,;;,M>BBØ' ;<>;' ,' ?<>F' F, ' =BØ' ; <>FBØ' B>0B B ;' 0>FB B> BØ' B ' < H B:' , ?ABØ' B;' E D<> B>0BO:' B22BØ' < ;' B ;B' ?>2H>;BBØ' B ' A,Ø =B' 2,' < ;,D B' =, Ø' 2B' F2>Ø' D , =' =B 0< = B6 1 ,' H D,=B' 0ØB;, ;' F< ;BB' ,>' F B=' =B' 2,' < ;,D B:' =BE,>;' 0<>;B ' 2B' ^' %BDB 6' >' < B ;' =B' 8B?AB?' =B' 2,' ^' = E 0 < ' N8,' , ;' A,2;B' > ' < B ;' F<> ' B' F,Ø ?; B' B ; , B' F, ' 2BØ' >@, =O6Ø ;' U,Ø' < 2@' ,;' ;A Ø' 0;, ;:' UAB ' ;AB' >D ; EBØ' < ' 1 B 2B8Ø ,;; ? ' UB B' F<> D' F,0;' 2 :' ;A,;' AB' D<;' A Ø' < =B Ø' < ' 22B@ B ' ;<' ,;;,? :' , =' 0;, ;B=' ;<' ?2 H' ;AB' O2<FB6 2 B B' >0;:' ;AB B < B:' 2 ,EB' HBB ' , ' ;B E,2' < ' < B' ;A, ' A,2 ' , ' A<> V F<00 H2@' < ' , ' A<> V HB;UBB ' ;AB' < B ;' UAB ' 18,22,?B' ;A >0;' 1 B 2B' < ' ;AB' F2,;B,>:' , =' ;A,;' ,;' UA ?A' "<@' ? <U B=' ;:' < 2@' ;<' HB' ,;;,? B=' , =' HB,;B ' H@' ;AB' BU2@' , EB=' %B ;A6 "< ' ;' ;<< ' ,' EB @' 2< D' ; B' < ' ;AB' " B ?A' 4;A' , =' 4 ;A' ;<' ?2 H' ;AB' O2<FB:' , =' ;AB@' < 2@' B,?AB=' ;AB' ;<F' U ;A' = ?>2;@:' ;AB' 0 O2 B Ø' < ' ;AB' ;A' , =' ;2' +< ;>D>B0B' , =' < ' 1 B,=B8Ø' U D' < ' ;AB' O6 ;A' A,E D' <>DA;' A, =' ;<' BBF' ;AB ' H,? 6

B@ B 8Ø' = 0F,;?A' Ø' BM>,22@' ?2B, ' ,Ø ;<' A Ø' ?< FO' A,E D' ,=B' ;U<' 0BF, ,;B' ,;;,? 0Ø6 B' ,==Ø' ;A,;' 0< B' < ' , >;8Ø' B ' UB B' ,22 B=' ' ; B' ;<' 0>FF< ;' "<@:' ,' 0;,;B B ;' < ' UA ?A' ' =' <' ?< <H< ,; < ' B2OBUAB B6

) ,F B ' ;AB ' A,Ø , 2B=' ;<' D ,0F' ;AB' 0 ;>,; < :' UAB ' AB' , BØ' ;AB' " B ?A' ? <U ' ;AB' ? B0;' ,H<EB' ;AB' F,00' < ' , ' ;< <' , =' ;AB' ? ;' <FF<0 ;B' ",22,??:' 5 ' @, =Ø' > ;AB ' < ;A:' ,;' ;AB' 0, B' < B ;6 =' ;AB' 0;,;B B ;' ;A,;' %B ;A8Ø' ?A, DB' U,Ø' = B?;B=' ,D, 0;' ;AB' <;AB ' 2, ' < ' ;AB' 0, B' ,00' ;A,;' U,Ø' HB,;B ' H@' ;AB' ;A' , =' O ;A' Ø' ,2;<DB;AB ' B < B<>O6

%B ;A8Ø , ,; EB' < ' ;AB' H>0 B00:' ' 0A< ;:' ;Ø ' U ;A' ;AB' " B ?A' 0;< @:' , =' >0;' HB' ?< 0 =B B=' ?< B?;6 + ?;< ' ?, <;' HB' ,?M> ;;B=' < ' =B2 HB ,;B' HB2 ;;2 D' < ' ;AB' F, ;' ;, B ' H@' A Ø ?<22B,D>B' ' ;AB' ,?; < 6 "<@8Ø ,;;,? :' ;A<>DA' ,=B' H@' < 2@' 0BEB' H,;;,2 < 0:' UA 2B' 1 B 2B' A,=' B2BEB :' U,Ø ;AB' < B' =, DB <>Ø' < ' ;2 ?' ;U<:' , =' U,Ø =B B,;B=' H@' %B ;A' ,2< B:' , ;B ' ;AB' 0 ,22 ,?; < ' < ' + ?;< 8Ø' < ?B' ' < ;' < ' ;' A,=' HBB ' H < B ' , =' ;A >0;' H,? 6

% & " ' O O N ' % ! $ '

& # %%) ( ) 8 ' # # ' ' #' %) # ' "' #

. # *

' =, U ' < ' BF;B HB ' ' H <>DA;' 0 ,22' ?< < ;' ;<' 1 ,00B ,6'
0' =B0FB ,;B' ,;;,? 0' < ' ;AB' F B?B= D' =,@' A,=' HBB ' BF>20B='
U ;A' 0>?A' B,0B' , =' 0>?A' AB,E@' 2<00:' ;A,;' B ;AB ' AB' < ' , @' < '
A 0' 0>H< = ,;B0' = B, B=' < ' B BU D' ;AB' ,;;B F;' ;<' < ?B' ;AB'
2 B' < ' ;AB' B ,6' 2@' ;A BB' ?<> 0B0' UB B' <FB ' ;<' A V ;<'
B; B,;' < ' 2 B =,:' D E D' >F' ;AB' ?, F, D ' ,0' < B' ;<<'
, H ; <>0' < ' ;AB' 0; B D;A' < ' A 0' , @:' < ' ;<' ?A, DB' A 0'
<HNB?; EB' , =' 0; 8 B' H,? U, =0' , ;' F< ;<: V '% 0H< ' UB B' HB@< ='
A 0' D ,0F: V < ' ;<' B =B,E<> ' ;<' <EB' & B22 D;< ' <>;' < ' A 0'
F<0 ; < ' H@' ;> D' A 0' 2, :' 0 ?B' ,' < ;,2' ,;;,? ' A,=' F <EB='
= 0,0; <>06' AB' 0;' ?<> 0B' U,0' ,=E<?,;B=' H@' < B' ;A, ' < B'
,=E 0B :' H>;' F B0B ;B=' <' ,;; ,?; < 0' ;<' ;AB' 1 , 0A,26' AB' U,0'
H<;A' <H0; ,;B' , =' , D @:' , =' = =' <;' = B, ' < ' ,' < B ;' < '
0F< 2 D' A 0' 2 ;, @' BF>;,; < ' H@' B; B,; D' ;, B2@' , ;B ' ,'
2<0;' H,;;2B6' AB' H2<U' ,;' F< ;<' U,0' BM>,22@' > ,;; ,?; EB6' AB'
A,=' HBB ' ;<2=' ;<' = EB' ;AB' # D2 0A' <>;' < ' +< ;>D,2:' , =' ;<'
?,F;> B' % 0H< :' <;' ;<' , B' ,' B B' 2<=DB B ;' < ' ;AB' * <> <6'
1 < B<EB :' ,0' AB' A,=' B , B=' ;<') B@' HB < B' ;AB' H,;;2B:' ' AB'
, ?AB=' < ' F< ;<' H@' ;AB' H,=' <,=' E ,' . RB>:' AB' DA;' ='
;AB' $; 0A' , @' < ?B' < B' ' A 0' < ;:' UAB ' AB' = BU' B, B '
;<' ;AB' ? ;@:' 0 ?B' ;AB' < H , F< ;<' # (E' 0' H<;A' 0A< ;B '
, =' HB;;B ' ;A, ' ;AB' H@ <,=0' UA ?A' AB' U<>2=' A,EB' ;<' F22<U6'
AB B' B , B=' ;AB' ;A ='F<00 H 2 ;@ V ;A,;' < ' ;> D' & B22 DY
;< ' <>;' < ' ;AB' $>00,?<' F<0 ; < ' H@' 2, D' <FB ,; < 06' AB'
?<> ; @ 0 =B' = =' <;' 2<< ' EB @' F < 0 D:' H>;' ;AB' ,;;B F;' >0;'
HB' ,=B6

#, 2@' < ' ;AB' ;A' ;AB' " B ?A' ?,E,2 @' U,0' 0B ;' <>;' ' H<;A'
= B?; < 0' ;<' BWF2< B' ;AB' UA<2B' B DAH<> A<<= V ,' ;,0 ' UA ?A'
1 ,00B ,' 0A<>2=' A,EB' F B0? HB=' ;<' ;' < ' ;AB' ;A' , =' P;A:

0;B,=' < ' BBF D' ;' ,00B=' ' A 0' B, 6' AB' B?< ,00, ?B0' 0B ;' 0<>;AU, =' H@' B@ B 8' 2 DA;' ?,E,2 @' H <>DA;' <' B ?<> Y ,D D' BF< ;6 ' ;AB' " B ?A' , @' ? <00B=' ;AB' 1 < =BD<:' ;' U<>2=' < 2@' > ' ,D, 0;' & B22 D;< 8' ?, B >22@' F BF, B=' F<0 ; < ' HBA =' ;AB' 2E,6' ", B8' ?,E,2 @' UB B' <>;' ' ;A 0' = B?; < :' , =' U<>2=' D EB', F2B'; B' < ' U, D' ;<',22<U';AB',22 B=', @' ;<' F,00';AB' < =0' < ' +B ,' <E,', =' , ' ;AB' 2< D' 0B B0' < ' B, ;AU< 06' 2@' ,' BFB; ; < ' < ' ;AB' >00,?<' = 0,0;B ' ?<>2=' <22<U' < ', ' ,;;B F;';<';, B';AB'< B 0 EB' < ' ;A 0' 0 =B6' " < ' ;AB' < ;A:' A<UBEB :' 1 < ;H > :' UA<' A,=' ==B ' <>;' U ;A' 0< B' < ' , ;B < W8' = ,D<< 0:' H <>DA;' , ' < B' ?ABB D' BU06' A 0' =BB=' U,0' ;AB' 2, ' UAB B:'< ' ;AB' 0;' F ? F2B0' < ';<F<D ,FA@:' 0< B' A<FB' < ' 0>??B00' DA;' A,EB' HBB ' 2<< B=' < 6' <', @' < B' 0;, = D' B ;AB ' < ' ;AB' $>00,?<' AB DA;0' < ' < ' ;AB' 2<UB ' =DB' ' < ;' < ' ;AB :', =' ?,0; D' , ' B@B' <EB ' ;AB' =,FF2B=', =' > BEB ' ?<> ; @ 0 =B' ;<';AB' < ;A:' ;' 0BB 0' ? B= H2B' ;A,;' ;AB B' 0A<>2=' HB' <' <>;B' UA,;BEB ' ,? <00' ;AB' B ,' =B' , , >2,6' $<;A' ;AB' 0B,?<,0; F2, ' < ' $B ,' , =' ;AB' E,22B@' < ' ;AB' B 0:' ;AB' 2 ;;2B' EB ' UA ?A'= , 0' ;AB' F2, ' < ' 1 < ;,D<,:' UB B' ;A ? 2@' F<F>2,;B=6' & ,0' ;' 2 B2@' ;A,;' ;AB B' U<>2=' HB' <' B, 0' < ' DB;; D' < ' ;AB' < B' ;<';AB' <;AB ' 0,EB' H@';AB' 3 ''((%% ;A <>DA' $>00,?<:' < ' ;AB' ? ?> ;<>0' <,=' , ' ;<';AB' < ;A:' < ' . RB>' ;<' EB <' E ,' "B , B ,', =' $B B ;,' AB' ,F0:' ;' 0' ; >B:' 0A<UB=' <' <;AB ' <>;B7 H>;' BEB @' =,@' ;A,;' AB' B , B=' ' +< ;>D,2' U,0' F <E D' < B' ?2B, 2@' ;<';AB' 1 , 0A,2' ;A,;' A 0' ,F0:' %<FBR', =' ;AB' B0;:' UB B' A<FB2B002@' ,??> ,;B6' AB' B ,' =B' , , >2,:' ;A<>DA' >DDB=:' 0' <;'< B' ?< ; ><>0' 2 B' < ' F B? F ?B0:' < ' 0' ;' < ', @' D B,;' ,2; ;>=B6' ' 0;' F ? F2B0' ;' U,0' F <H,H2B' ;A,;' ;AB B' DA;' HB' < B' < ' < B' F,00,DB0' ' ;A 0' 0; B;?A' < ';A ;@' 2B0:' ;A<>DA' ;' U,0' ?< ?B E,H2B' ;A,;' ;AB B' DA;' HB' <' <,=' <EB ' UA ?A' , ; 22B @' ?<>2=' ; ,EB2' \

AB B' U,0:' ;AB B < B:' <;A D' ,0;< 0A D' ' ;AB' ,?;' ;A,;' 1 < ;H > ' = 0?<EB B=' ;A,;' 0>?A' ,' ; ,? ' BW 0;B=:' B' 2B0' < ;A' < ' $>00,?<:' > D' < ' 1 < ;,D<,:' H@' EB2B ,' , =' $< ,2E<:' ;<' , =,<' ' ;AB' E,22B@' < ' ;AB' D>B=,:' < B' < ' ;AB' , 2>B ;0' <

' 0' ,' ,;;B ' < ' ,?;:' ;AB' <=B ' ,2U,@' < ' < H ,' , =' +, F2A<0,' ;<';AB' >FFB ' 1< =BD<' =<B0' <;' >0B';AB' F,00' < ' $>00,?<:' H>;' D<B0' < ;A' < ' ;:' <> =' ;AB' 2B ;' 2, ' < ' &B22 D;< 8' F<0 ; < :' H@' %>0<:' , ' 0<>;A' < ' ;AB' $< ,2E<' <,=' ;<' 1< ;,D<,6

5 # # # . # * /

;AB . <>D,6 AB B U,0 <;A D F, ; ?>2, 82@ 0; , ;2 D ;AB = 0?<EB @: < = = ; F2@ , @ 0FB? ,2 FB 0F ?, ? ;@ ;AB = 0?<EB B 0: ,0 , @ < ;AB " B ?A , , ; EB0 0BB ;< F2@6 FB,0, ;?,F;> B= < B< ;AB=B0B ;B=E 22,DB0 A DA >F ;AB B 0: , = ? <00 M>B0; < B= H@ 1,00B ,80 +< ;>D>B0B , =B =B ?, F 1,0?, B A,0: UA< ,??< F, B= , ;B < W < A 0 B?< Y , 00, ?B: BEB,2B= ;AB ,?;;A,;;A 0 ?<> ; @ <,= BW 0;B=6 B BEB : ;; 0 0, =: BWF B00B= ;< A 0 ?< F,; <;A 0 0> F 0B ;A,;;AB " B ?A A,= <;;;, B ; UAB 0;;AB@ , EB= ,;1 < ;,D<,: 0 ?B ;U,0 > D>, =B=: UA 2B ;AB UA<2B ,22 B= , @ U,0 2@ D ,? <00 ;AB $>00,?< # :((%% U,0: AB 0, =: A,H ;>,22@ >0B= H@ ;AB <W U,DD< 0 < ;AB FB,0, ; @G ;U,0 <;, D<<= <,=: H>;U,0,FB B?;2@ F ,?; ?,H2B < B6

& ;A ;A 0 ,22 F< ;, ;BU0 1 < ;H > , = , ;B < W B;> B= ;< 1,00B , ,H<>; ==,@6 AB 1, 0A,2 ,; < ?B B0<2EB= ;< , B , ;,;B F;;<>; 2 RB ;AB $< ,2E< <,=6 AB B U,0 0< B = , DB = <D 0<: 0 ?B ;U,0 F<00 H2B ;A,; & B22 DY ;< DA;U, ;; 22 ;AB D B,;B F, ;< ;AB " B ?A , @ A,= B; B= < A 0 < ;: , = ;AB =B0?B = >F< ;AB B, D>, = , =<EB UAB2 ;6 : < ;AB <;AB A, =: AB DA;A,EB ,=B F BF, ,; < 0 ;< A<2= ;AB > ;AB B = < ;AB F,00: 0<;A,;U2N , ;AB E, D>, = < ;AB E,=B 0 U,0 B, D $< ,2E< < , =,< ;AB@ DA;= : B : U ;A= ,U < ;AB $>00,?< F<0 ; < A,0;B: 2@ D ,? <00 ;AB F,;A ,;0< B = , DB <>0 ;> < ;AB <,=6 =BB=: UB ,@?< =B ;2@ ,00B ;;A,; ;AB $; 0A DB B ,2 A,= F<00B00B= ;AB , @ ;A,; AB <U B= 1,00B ,U<>2= A,EB A,= ;AB 0, B > F2B,0, ; BWFB B ?B ;A,; HB B22 <>2;, ;< ,> B : UAB AB ,;;B F;B= ,F B? 0B2@ 0 2, , <B>E BV ,2, , ?A <> = ;AB ,22 B= , @ < ;AB =,@ , ;B ,2<0; H,;;2B6

$>; 1,00B ,U,0 F BF, B= ;< ;, B 0 0: , = ;AB 0 UA ?A : AB U,0 <U ,??BF; D U,0 ,? 0 =B ,H2@ 2B00 FB 2<>0 < B ;A, ;A,; UA ?A AB A,= ?> B= UAB AB ?A<0B ;< , B , < ;,2 ,;;,? < ;AB $>00,?< F<0 ; < < ;AB F B?B= D =,@6 "< ;A<>DA 2, , ?AB0 ,? <00 , B B @80 < ;, B N>0;2@ =BF BY ?,;B= H@ BEB @ 2;, @ ,>;A< ;@: ;A 0 U,0 < B BWB?>;B= ,; , = 0;, ?B < B < ;B 2B0 < ;AB $; 0A 2 B: , = <; ,2BEB2 ?<> ; @: < ;< UA ?A & B22 D;< DA;B,0 2@ =B0?B = < A 0 ,0; B00: H>; ,H < B U<<=B= >F2, =: >22 < =DB0

DA; ,22:' ;AB B < B:' ;AB' <EB B ;' < ' ;AB' " B ?A' U,0' UB22' ,0?B Y ;, B=6' ;' DA;' B, ' B B2@' ,' DB B ,2' B; B,;' < ' 1 < ;,D<,' , =' , ' ,H, =< B ;' < ' ;AB' ?, F, D ' \' H>;' ;A 0' U,0' <0;' > 2 B2@6' ", ' < B' F <H,H2B' U,0' 0< B' , ?A' ;<' ;> ' ;AB' ,22 B=' 2, ' H@' ;AB' F,00B0' < ' ;AB' B ,' =B' , , >2,6' & B22 D;< ' A Y 0B2 ' A,=' <' =<>H;' UA,;BEB ' ;A,;' ;A 0' U,0' ;AB' B B @80' ;B ;< 6' 0' ;AB' =>0 ' B22' AB' 0;<<=' < ' 0< B' ; B' < ' ;AB' 0> ;' < ' ;AB' B ,:' U,;?A D' ;AB' " B ?A' ?<2> 0' B?B= D' ' ;AB' = 0;, ?B6' B' ;AB ' <=B' H,? ' ;<' A 0' AB,=' M>, ;B 0' ,;' ;AB' ?< EB ;' < ' $>00,?<:' , =' = ?;,;B=' U ;A<>;' =B2,@' ,' 0B B0' < ' <=B 0' UA ?A' 0B;' A 0' UA<2B' , @' ' B; B,;' < ' < H ,' , =' % 0H< 6' $B < B' =,@2 DA;' ;AB' F<0 ; < ' U,0' =B0B ;B=:' < 2@' ,' B, D>, =' HB D' 2B ;' < ' ;6' B' =<B0' <;' 0BB ' ;<' A,EB' ;A<>DA;' < ' ,' < B ;' < ' ,;;,? D:' < ' ;AB' <22<U D' < D:' ;AB' =' < F0' , =' %< 0< 80' = E 0 < :' UA ?A' A,=' HBB ' 2B ;' ' A 0' < ;:' < ' < ' = B?; D' A 0' DA;' U D' ;<' , ?A' < ' , =,<:' UA ?A' ;' ?<>2=' A,EB' B,?AB=' 2< D' HB < B' ;AB' " B ?A' , EB=' ;AB B6' #,?A' < ' ;AB0B' ?<> 0B0' U,0' 0<' <HE <>0' ;A,;' ? ; ?0' A,EB' 2,E 0AB=' H2, B' >F< ' A ' < ' <;' ,=<F; D' ;AB' < B' < ' ;AB' <;AB

AB' BWF2, ,; < ' < ' A 0' ?< =>?;' 0' B ;AB ' ;A,;' AB' , 2B=' ;<' 0BB' ;AB' ;U<' ,2;B ,; EB0' UA ?A' UB B' ' A 0' F<UB :' < ' ;A,;' AB' 0A<UB=' I,0' 0BEB ,2' " B ?A' U ;B 0' , ;, J' , ' BW?B00 EB' ; = ;@6' ; 22' 2B00' 0' ;' F<00 H2B' ;<' > DB:' ,0' 0< B' A,EB' =< B:' ;A,;' AB' U,0' > B=' H@' A 0' <U ' 2B?;' ;<' <???>F@' ;AB' $< ,2E<' <,=6' B' BU' < ' ;A,;' F,00:' A,=' ;, B ' ;' ;<' ?< 0 =B ,; < :' , =' ' < B' < ' A 0' = 0F,;?AB0' 0FB, 0' E,D>B2@' < ' ,' B, 0' UA ?A' AB' U,0' A<F D' ;<' = 0?<EB ' ;<' B =B ' ;' >0B2B00' ;<' ;AB' B B @' A 0' B B=@' ?, Y <;' B, :' ,0' 0< B' A,EB' 0>FF<0B=:' ;AB' <E D' ;A ;AB ' < ' , ;80' ?< F0' < ' +< ;>D>B0B' 2 ; ,6' ;' 0' ; >B' ;A,;' & B22 D;< ' A,=' < =B B=' ;A 0' < ?B' ;<' <???>F@' , =,<' 0< B' =,@0' HB < B6' $>;' ;' U,0' B ;AB ' 2, DB' B <>DA:' < ' ?< F<0B=' < ' ; <<F0' 0<2 =' B <>DA:' ;<' B0 0;' BEB ' ' ,' 0; < D' F<0 ; < :' ;AB' ,;;,? ' < ' ,' 0 D2B' " B ?A' H D,=B6' < B' <;AB ' =BE ?B' >0;' A,EB' HBB ' B, ;:' ;A<>DA' UB

' A 0' U,0' ,D B=' ;<' HB' ;AB' ?,0B' H@' 0< B' <H0B EB 0:' UA<' <EB ,;B=' 1,00B ,80' 2<00:' , =' ;A<>DA;' AB' A,=' : ' ?,0>,2; B0' < ' ;AB' 4;A6

T' BB:' < ' BW, F2B:' " < :' FF6' P:' < B <:' 6' PO6' 2 B 0:, =' BEB '),F B :' 6' 6

T' 1 () ' #%(' E 6' OP 6' ,=' AB' F <F<0B=' ;<' H2,0;' ,U,@' 0B?; < 0:' 0<' ,0' ;<' , B' ;' F,00,H2B' < ' UABB2' ; , ?:' ,0' AB' = =' U ;A' ;AB' #0; ,=,') <E,' 4

$>00,?<:‘ ;AB B‘ U,0‘ <‘ F<0 ; < ‘ ;A,;‘ UB‘ ?<>2=‘ ;, B‘ >F‘ U ;A‘ ,=E, ;,DB:‘ ‘ UA ?A‘ UB‘ ?<>2=‘ HB‘ ?B ;, ‘ ;A,;‘ UB‘ ?<>2=‘ F BEB ;‘ ;AB‘ B B @‘ < ‘ DB;; D‘ ;<‘ % 0H< ‘ HB < B‘ >0:‘ ; 22‘ UB‘ B,?AB=‘ ;AB‘ < ; B=‘ F<0 ; < 0‘ ‘ < ;‘ < ‘ ;A,;‘ F2,?B‘ 0‘ ;<‘ ;AB‘ <;AB ‘ F<00 H 2 ;@:‘ ;A,;‘ < ‘ ,;;,? D‘ ;AB‘ " B ?A‘ B, D>, =‘ HB2<U‘ $>00,?<‘ 0;B,=‘ < ‘B =B,E<> D‘ ;<‘ 0;<F‘ ;0‘ E, D>, =‘ ,;‘ , =,<:‘ & B22 D;< ‘ < 2@‘ <H0B EB0‘ ;A,;‘ K ;AB@‘ A,=‘ ,;‘ 2B,0;‘ : ‘ < 0: ‘ < B‘ B ‘ ;A, ‘ UB‘ A,=:‘ , =‘ D<<=‘ ,0‘ <> ‘ F<0 ; < ‘ U,0:‘ ;AB 0‘ U,0‘ BM>,22@‘ D<<=68‘ ‘ AB‘ A,=‘ ;=2B ‘ >F< ‘ B@ B :‘ ;AB‘ 2,;;B ‘ IAB‘ ;A<>DA;J‘ ?<>2=‘ A,EB‘ =B;, B=‘ A ‘ 2< D‘ B <>DA‘ ;<‘ ,22<U‘) B@‘ , =‘ C> <;‘ ;<‘ B;> :‘ , =‘ 0<‘ AB‘ U<>2=‘ A,EB‘ <> =‘ A 0B2‘?< ;;B=‘;<‘ , ‘< B 0 EB‘,?; < ‘,D, 0;‘0>FB < ‘ > HB 0‘ < ‘ > ,E<> ,H2B‘ D <> =6

2 B0B‘ , D> B ;0‘ , B‘ > , 0UB ,H2B‘ UAB ‘UB‘ ?< 0 =B ‘ & B22 DY ;< 80‘ F<0 ; < 6‘ B‘ 5#“ A,EB‘ 0>??BB=B=‘ ‘ ?AB? D‘ 1 ,00B ,‘ ,;‘ $< ,2E<‘ < ‘ , =,<7 H>;:‘ ‘AB‘ = =‘ <;:‘ > ‘ U<>2=‘ B 0>B:‘ 0 ?B‘ AB‘ DA;‘ HB‘ ?>;‘ < T‘ < ‘;AB‘ =B;,?AB=‘?< F0:‘, =‘ ;AB ‘ U<>2=‘ <;‘ A,EB‘ B ‘ B <>DA‘ ;<‘ A<2=‘ ;AB‘ % B0‘ < ‘ < B0‘ .B= ,06‘ B‘ 5#“ A,EB‘ ? >0AB=‘ B@ B ‘ HB < B‘ AB‘ U,0‘ 0>??<> B=:‘ H>;‘ ‘AB‘ , 2B=‘ ;<‘ =<‘ 0<:‘, =‘ HB?, B‘ E<2EB=‘ ‘,‘ DB B ,2‘ ,?; < :‘ ,‘ = 0,0Y ; <>0‘ =B B,;‘ U,0‘ F<00 H2B6‘ ‘ 0A< ;:‘ ?< 0 =B D‘ UA,;‘ , 2> B‘ U<>2=‘ B, V ;AB‘2<00‘< ‘% 0H< :‘;AB‘ B B H, ,; < ‘< ‘;AB‘, @:‘ F <H,H2@‘ ;AB‘ B =‘ < ‘;AB‘ +B 0>2, ‘ & , V AB‘ DA;2@‘AB0 ;,;B=‘;<‘ ;, B‘, @‘ 0 ‘ UA,;BEB 6‘ ;‘ ;AB‘0, B‘; B:‘ UB‘ ,@‘0>0FB?;‘;A,;‘ ‘;AB‘,22 B=‘, @‘< ‘ ‘A,=‘ HBB ‘;AB‘, @‘< ‘ :‘ & B22 DY ;< ‘ DA;‘ EB @‘F<00 H2@‘A,EB‘ F2,@B=‘,‘ < B‘B ;B F 0 D‘D, B6‘ $>;‘ ;AB‘ +< ;>D>B0B‘0; 22‘ < B=‘ ;AB‘2, DB ‘A,2‘< ‘A 0‘ < ?B:‘, =‘ ;A<>DA‘ AB‘A,=‘ ,0?B ;, B=‘ H@‘ ;AB ‘ HBA,E <> ‘ < ‘ ;AB‘ 4;A‘ ;A,;‘ ;AB@‘ UB B‘ <U‘?,F,H2B‘< ‘ DA; D‘0;B,=2@‘ ‘,‘=B B 0 EB‘,?; < ‘ < ‘ ,E< ,H2B‘D <> =:‘ ;‘U,0‘ BEB ;AB2B00‘ EB @‘=<>H; >2‘ UAB;AB ‘ AB‘?<>2=‘=, B‘;<‘ 0 ‘ ;AB ‘ ‘ ,‘ H,;;2B‘ <>DA;‘ > =B ‘= B B ;‘ ?< = ; < 06‘ B ?ABB D‘BW, F2B‘< ‘;AB‘?<> ,DB‘, =‘= 0? F2 B‘ ‘< ‘;AB0B‘ BU2@‘< D, RB=‘ BD B ;0‘= =‘ <;‘N>0; @‘A ‘ ‘;, D‘ ;‘ < ‘D , ;B=‘;A,;‘;AB@‘?<>2=‘HB‘; >0;B=‘> =B ‘ ,22‘F<00 H2B‘?< Y = ; < 0:‘ ,0‘ ‘;AB@‘UB B‘EB;B , ‘ $; 0A‘ ; <<F06

‘ ;AB‘ =,U ‘ < ‘ BF;6‘ 5:‘ ;AB B < B:‘ ;AB‘ ;U<‘ , B0‘ UB B‘ , ?A D‘ ,U,@‘ < ‘ B,?A‘<;AB 6‘ ‘ ;AB‘ $>00,?<‘ F<0 ; < ‘ ;AB B‘ B , B=‘< 2@‘ ,> > =80‘% DA;‘ * E 0 < :‘0; B D;AB B=‘ H@‘

0< 8Ø ?,E,2 @ H D,=B: UA ?A U,Ø H <>DA;' >F HBA =' ;AB B ,:' ;<' < ' ;AB <> ;B=' 0B?; < ' < ' ;AB < ?B UA ?A U,Ø < ' ;AB BW;' ;B ' =,@Ø ;<' ,?;' ,Ø ;AB B, D>, =' < ' ;AB ,22 B=' , @6 FF<0 ;B ;AB ' < 2@ B@ B ' B , B=:' , =' AB A,=' = ,U ' , ' H,? ' < ' ;<' ;AB 1 < ;,D<,' <,=:' UAB B AB 0;<<=' ' ,' =B B 0 EB F<0 ; < ' ' ;AB < D:' H>;' B; B=:' H D,=B , ;B ' H D,=B:' ' ;AB , ;B << 6 AB , ' H<=@ < ' & B22 D;< 8Ø , @ U,Ø B; D ' ;U<' ?<2> 0 22:' , =' , 2;< 8Ø +< ;>D>B0B = E Y 0 < ' ? <00B=' ;AB < =Ø < ' +B ,' <E,' , =' , ?AB=' < ' #0F A,2 , =' A< , 6 AB < ?B UA ?A A,=' HBB ' 2B ;' , ' <>;' < ' ;AB DA;' HBA =';AB 2E,V ", B8Ø?,E,2 @, =' %B?< 8Ø +< ;>D>B0B 2 ; , V ' N< B=' 22 , =' ,??< F, B=' A ' ;<' % 0H< 6 A Ø ?<2> ' U,Ø ,H0<2>;B2@ > <2B0;B=' H@ ;AB B B @ => D ;AB UA<2B ;UB2EB =,@Ø < ' ;AB B; B,;' ;<' ;AB % B0 6 AB " B ?A = =' <;' 0< >?A ,Ø <22<U ;' U ;A ,' ?,E,2 @ F,; <26 AB <;AB ' , =' 2, DB '?<2> :' < B=' < ' FB ?B :' <2B:' %B ;A:' , =' + ?;< :' U ;A' +,? 8Ø:' <2B , 8Ø:' , =' 2BW6 , FHB228Ø +< ;>D>B0B:' , ?AB=' < ' 1B,2A,=,' , =' < H ,6 ,> > =' , =' 0< ' 0;, ;B=' ;UB2EB A<> Ø 2,;B ' ;<' H D >F ;AB B, 6 * > D ;AB A<> Ø UA 2B ;AB % DA;' * E 0 < ' U,Ø U, ; D ;Ø < =B Ø ;<' 0;, ;:' 0< B' < ' ;Ø < ?B Ø BWF2< B=' ;AB BE,?>,;B=' " B ?A' F<0 ; < :' , =' <> ='F, B=' ' , ' B ??<0> B' O ' =B0FB ,;B2@ U<> =B=' 0<2= B 0:' UA< ' 1,00B ,' A,=' ,H, =< B=' ;<' ;AB B ?@ < ' ;AB +< ;>D>B0B' FB,0, ; @6 B' A,=' >0B=' >F ,22 ,E, 2,H2B' ?, ;Ø , =' >2B0 ;<' ?, @ A Ø U<> =B=:' H>;' A,=' HBB ' < ?B=' ;<' 2B,EB ;AB' U< 0;' ?,0B0 HBA =6 AB@ UB B' F ? B=' >F , =' <EB=' ;<' ;AB ?< EB ;' < ' $>00,?< 7 < ' UA,;' HB?, B' < ' ;AB ' , ;B U, =Ø ;' Ø UB22 <;' ;<' 0FB?>2,;B6) <' B =2@ ?<2> ' ?, B' ;A,;' U,@ ,D, ' , =' ;AB =B , R,' UB B' =, 2@ D <U D < B' BW,0FB ,;B=' ,;' ;AB ?< =>?;' < ' ;AB E,= D' , @6 AB' " B ?A' UB B' <;' < 2@ ?, @ D' <>;' ' , ' ;B Y ;;B ;' ,0A < ' 1,00B ,8Ø B= ?;' < ' BF;6 O:' = B?; D';A,;' ,22 B ' U ;A' , Ø H>;' U ;A<>;' > < Ø UB B' ;<' HB' 0A<;' ,;' 0 DA;:' H>;' H> D' BEB @ E 22,DB' ;A,;' ;AB@' F,00B=:' , =' > =B D' B, 2@

' BB' < 0< :' F6 OO:' , =' E< ' % 0 DB 8Ø * , @:' ' $B, 0A:' 6 5 6 " < ' , =' ;AB' <;AB ' " B ?A' , ,;EBØ 0FB, ' < ' ;AB' = ?>2; BØ < ' ; , OY F< ; D' ;AB' U<> =B=:' A>;' =<' <;' B ; < ' ;A,;' , @' UB B' ,H, =< B=6 T ' 2BOØ 0< B' < ' B@ B 8Ø B, D>, =' ?,E,2 @ ,@' A,EB' 2<< B=' ' ,;' $>00,?< ' < ' ;AB' ;A:' UAB ' ,> > =' A,=' D< B6 Ø Ø F<00 H2B6 B ;8Ø +< ;>D>B0B' UB B' H,? ' ' ;AB' F2,?B' < ' ?;6 O6

5 # # # . # * A' 89#

BEB @ FB,0, ;; ;A,;; ;AB@ ?<>2= A> ;; =<U :. UAB;AB AB U,0 HB, D, 0 < <

1 B, UA 2B:. < ; ;AB 5;A , = ;A < BF;B HB :. ;AB " B ?A , @ U,0 BWB?>; D ;0 2, , ?A:. F ,?; ?, 22@ > <FF<0B=:. ;A<>DA <;; > <H0B EB=6 , ;B < W80 = E 0 < < ; = ,D<< 0 U,0 ,;; ;AB AB,= < ;AB 2 B < , ?A6 ;AB ?, B ;AB , ; @ < ;AB ;A < F0:. UA ?A A,= HBB F>;; ;AB E, D>, = HB?,>0B ;; A,= <;; 0> B B= ,;; $>00,?<6) BW;; ?, B ;AB B0B EB ?,E,A@ < 1 < ;H > :. <22<UB= H@ ;AB (, = +, , = ;AB ,00B= H,DD,DB < ;AB P;A , = ;A < F0:. WB= U ;A ,; ?< E<@ < <EB : U<> =B=6) B@80 ; <<F0 H <>DA;;>F ;AB B, < ;AB , ?<2> 6 B@ B U,0 ,; =,@80 , ?A ;< ;AB B, 7 A,E D 0FB ;; ;AB 5;A <FF<0 ;B ;AB $>00,?< AB DA;0:. AB < 2@ B,?AB= 1 < ;,D<,; ;A,;; BEB D6 , ;B < W80 ?,E,2 @ < ; ;A 0 0, B =,@ A,= F,00B= ;AB U,;B 0AB= , = B,?AB= EB22, 0 =B ,:. UAB B ;AB@ B;; ,; F,; <2 < * B (B@80 = ,D<< 0:. UA< A,= 0B ;; F, ; B0 <>;; ,22 = B?; < 0:. < ; ;AB AB,= M>, ;B 0 ,;; 1 B,2A,=,; ;AB ?<,0;; F2, 6 " < ; ;A 0 ; B < U, = ;AB " B ?A ,=E, ?B= D>, = U,0 U,;?AB= H@ ;AB <> BD B ;0 < 2,=B , = * B (B@:. UA< UB B = B?;B= ;< A<2= H,? ;0 BWF2< D ?,E,2 @:. , = <;; ;< FB ;; ;< B,?A < H , , A<> 0<< B ;A, ?<>2= HB AB2FB=6 AB B U,0 ,20< , ?2,0A < ; ;AB , ;B << < < ; ;AB ;A HB;UBB F, ;; < , ;B < W80 = ,D<< 0 , = ;AB +< ;>D>B0B 2 ; , < , ;; < ; < , =,<6 , ;; A,= HBB < =B B= ;< HB , ;; ;A,;; F2,?B

A 0 0BB 0 F <EB= H@ ;AB ,H2B < * , ,DB0 ?< ;;B= H@ ;AB " B ?A @ F>H2 0AB= H@ ;AB < H , ,>;A< ; B0 :. UA ?A D EB0 ;AB > HB < A<>0B0 H> ;; = FB 0< 0 22B= B,?A > ,2 =B, B @ I, ?@F B0;,=<J < ;AB H 0 <F ?< < H ,6 ;; D ;AB > ,2 =B, B B0 0<>;A < ;AB 1 < =BD<:. UAB B ;AB =, ,DB0 UB B , 2@ =< B => D ;AB B; B,;< ;AB " B ?A 1 , ?A :. , = ;, D < 2@ ;A<0B < ;A < ;AB EB :. UAB B <A<0; 2B ?<2> ,FFB, B= ;,B ?;<HB V ;AB = 0; ?;; A,E D HBB F <;B?;B= H@ , ;; , = & 20< => D 1,00B ,80 B;> , ?A:V UB = ;AB <22<U D 0;,; 0; ?0 7V

@-2 - 1 * * 25*2 &9 .- 0 5 E 22,DB0 , = O4 0<2,;B=

A<>0B0 H> ;6

:. 2 EB A, A<>0B0 H> ;6

:. ,RB=B 55 O

< H , ? ;@ 0 :: 4

AB D> B0 < ;AB =B, B B0 0<>;A < 1 < =BD< I <> B:. D, 2:. B= A,:. 1 , =, = < E<:. =B:. B,J , B B < <>02@ A DAB 6 BB < , < =, %>R:. 6 6

< BF;B HB 47 AB< 2@ , EB=;2 B B< ;AB , ;B << < ;AB ;A: <;H@ A 0 <U ,>2;: H>;HB?,>0B A 0 0>FB < < ?B $,??B22, : ?< , = D ;AB UA<2B 2 ; ,< ;AB)< ;A: A,=< =B B= A ;< <EB < % , BD< ;< , =,< H@ ;AB ? Y ?> ;<>0 <,= ,2< D ;AB * <> <: , = ;AB < " B ,0<>;AY U, =: 0;B,=< ; , D ;AB 0; , DA;<,= ,? <00 ;AB <> ;, 0 < ;A < . RB>: UAB B AB DA;F<00 H2@ A,EB HBB 0;<FFB=H@ 0< B <>;2@ D " B ?A =B;,?A B ;6 , ;A,= ,; ;AB < B ; < 2@ ,0M>,= < < = ,D<< 0 , = <> 2 ; , BD B ;0 U ;A A I+< ;<: +B , B2: < H ,: , = , H, ; ;,2 < < 2 DA;?< Y F, B0J: , =;AB0B: < A, = , ?A D: , = < =B0B ; < : UB B ,22 2B00 ;A, : 0; < D6 9 <U D ;A, ; AB U,0 BWFB?;B=;< A<2=;AB =BH<>?A < ;AB $< ,2E< <,=,D, 0;, @;A D 0A< ;< ,0; < D < ?B: , ; ,=B , ; ;;B F;;<0;, =A 0 D <> =6 $>;A 0 E, D>, W H<2;B=, ;;AB 0;0A<; B=: , =U ;A ;AB B0;AB A,=;< , B ,A> B= B; B, ;HB@< =;AB . <>D, : 2B,E D ;AB <,= BB;<;AB " B ?A , ;B (< W A,=,2 B,=@F>0AB=

T ?, <;B0 0;M><; D AB B B ;80 ,??<> ;< ;AB B D,DB B ;6 B U,0 , , M>, ;A> <> : , = ;AB ,22 ;<< BU 2B;;B 0 < A ;< (B B ,2 C6 & 20< : UA ?A A,EB ?< B ;< @ A, =0 H@ ;AB ?<> ;B0@ < & 20< 80 BF B0B ; , ; EB6 ,F; , $B ; , A, HB 0: 6) 6: 0F B B U ;A BD B;;A, ; A,EB <;2 0 UA<2B ?< B0F< =B ?B6 A,EB < ?B < B HBB F>;; D @ B22<U0 ;< , ; , ,2 V @ , ,=< B H, ; ; ,2 < = = <;=< ,0 ; <>DA;, = A,= ,H<>;;A ;@ 22B=: U<> =B=: , = F 0< B 0: U ;A<>; , D 0?, ?B2@ , @ B0 0;, ?B V , F2B,0, ; H>0 B006 ;AB ;A U,0 0; 22 , ; D>B=, I , =,< , = D>B=, , B < B E 22, DB: F <FB 2@ 0FB, D: H>; = E =B= H@ , H =DBJ: ;A<>DA U,0 ,U, B ;A, ; ;AB " B ?A F ? F,2 < ?B < ?,E,2 @ U,0 , ; $<@,2E, : < 2@ , 2B, D>B < D>B=, : , = U,0 ?< F2B;B2@ ?>; < < < ;AB , @6 ;A, ; < D A,= U ;A= ,U ;AB , ; @ ;< ;AB . <>D, : A>; F2, ?B= @ = ,D<< 0 ?2<0B ; < D>B=, ; <H0B EB ;AB " B ?A: U ;A ;AB , ,=< B0 , ; , A,2 U,@ = 0; , ?B ;< 0>FF< ; ;AB 6 F>; ;AB ; ;2 B <0; , =E, ; , DB<>0 F<00 H2B F<0 ; < : F <;B?;B= H@ , ?2<0B F B U<<=: ;A <>DA UA ?A ;AB " B ?A ?, E, 2 @ >0; F, 006 A, = HBB < ;A BB ;AB < D ; 22 < B <8?2<? : , D @ , , DB B ;0: , = A, = N>0; 0, ; =<U ; <B, ; 0< B;A D: , ,0 ,22 E 22, DB < ;AB 2B ; < ;AB . <>D, : UAB , = ,D<< ?, B 2@ D ; < B ;A, ; ;AB " B ?A UB B ?< D < U ;A ;U<?<2> 0 < ?, E, 2 @ >22 0FBB=6 1 @ ?< BB U,0 <; B, =@: , = B , B= < ;AB " B ?A ;< , >0B ;AB 0B2EB0 U ;A6 A, = < 2@ ; B ;< DB; ;AB +B , B BD B ;<EB ;AB H =DB UAB ;AB " B ?A , EB= V EB >;B0 0<< B , = A, = HBB ,AAB=(= BU >F , ,D<<= F<0 ; < : H>; ;AB " B ?A = = <; ? <00 ;AB . <>D, : , = B;> B= ;< 2 EB , U ;A<>; <2B0; , ; < V H>; <; U ;A<>; , = , B= ,20B ,2, , =

HB;UBB A , =;AB$;60A?,E,2@:UA< <UHBD, ;<, B,
02<U B; B,;;<U, =0 1B,2A,=,6 ;;A,;F2,?B:B, 2@< ;AB ;A:
2,=B, =*B(B@UBB N< B=H@ 0< 80B DA;0M>,= < 0:UA<
A,=?< B ,;;AB;, 2< , >> =80=E0 < , ;B ;AB B, D>, =
BE,?>,;B=;AB$>00,?<F<0 ; < 6 ;A 0=,@;AB , ?<2> <
;AB$; 0A , ; @ , ?AB=;A <>DA < H ,:2B,E D;AB
% DA;* E0 < ,2< B ;AB?;@6 &B22 D;< 80AB,=M>, ;B 0;A,;
DA;UB B ,;< =B W,0 W 2B0 0<>;A< ;AB 1 < =BD<6 AB
;A BB?,E,2@H D,=B0 B; B=:H? B D U ;A;AB" B ?A,=E, ?B=
D>, =,22=,@:,0 , ,0 "< <0:B DA; 2B0 < ;A< < H ,6
1,00B ,80 , ; @:, ;B B B D D < ;AB$< ,2E<F,00:UB B
<U F>0A D 0<>;A:, =H E<>,? B=< ;AB DA;< ;AB ;A:
)B@, =C> <;80?< F0 ,;1B,2A,=,: B@ B 80,;$, B <:;B
2B0 HBA =;AB<;AB 06 AB H 0?>;UA ?A;AB" B ?A, @
A,=;, B U ;A ;< 2 B=,U,0 <U ,2 <0;BWA,>0;B=:, =
;U,0 ,D B,;B2 B ;<;AB; <<F0 ;< =: ;AB=B0B ;B=E22,DB0
< ;AB F2, < < H ,:?< 0=B ,H2B M>, ; ; B0< , RB, =
?B:U ;A UA ?A ;AB@?<>2=B B <>;< BF2,?B ;AB?, B >22@
A<, =B= ,;< 06

1B, UA 2B ;AB?;@< H ,U,0 >22< =0; B00 D 0?B B06
A<>DA &B22 D;< A,=<=B B=;AB UA<2B F<F>2,;< < & BOY
;B $B ,;<2B,EB ;AB ,H<=B0 ,0 0<< ,0 ;AB" B ?A B,?AB=
. RB>:@B;< 2@ ;AB ?AB0;< ;AB A,H;, ;0 < H ,A,=
=BF, ;B=6 AB H>2 A,=0; 22 AB2=;<;AB A<>0B0:, =;AB6
BU0 < ;AB E ?;<@< $>00,?<A,=B ?<> ,DB=;AB ;;<A<FB
;A,;< BE,?>,;< U<>2=HB B?B00, @6 AB+<;>D>B0B D<EB

F, ?< ;AB F, ;< ;AB= ,D<< 0 U2< UB B ?<EB D @ B, 6 2B@
D,22<FB=;A <>DA;AB , ; @:, =?, B=?< >0 < , =,22 ;AB?< < ;0
< AB22;< F< ;<0 % B>;B , ; <2< B2!$,E<> B $< H,0;<:8 UA<?< Y
, =B=;AB , ,=< B0:< =B B=A 0 B ;<B:H>;;A<>DA;;A,;B <>DA
< A 0 A< <> :,0 AB 0;, ;2@2B ;;AB ;<0A ;< ;AB 0B2EB0:, =BEB
2<< B=HBA =; 22 AB B,?AB= F< ;<6 F>;;A 0 B22<U:U ;A <> <;AB
2B,= D= ,D<< 0: ;<;AB?< < =>DB< <;A 0 F2,?B:, =, ,H<>;;<
2?;0< B =E0 < ,2 F> 0A B ;: < ;=,B 8;BF< ;0>?A?< =>?;;<
;AB 1, 0A,2I$B B0 < =J:UA<=B0 <;F> 0A H@A,2EB0 1@ BD B ;0
< , ; @V;A 0 0 ;AB H DA;B 0=B< ;AB F?;> B V0A<UB= <,D;,;< :
<;U ;A0;, = D ;AB ,;;,? < ;AB B EB06 AB B B @80 < ?B: <U
,0?B;, :U,0 ?,E,2@:;U< F B?B0:, =;U< , ;@ BD B ;06 2B
?,E,2@,2< B U<>2=A,EB=< B @H>0 B00 ;AB@A,=? <00B=;AB. <>D,
$>;;AB@?< ;B ;B=;AB 0B2EB0 U ;A = E D ;AB = ,D<< 0 , =;AB
,?,=< B H,;;,2 < < D>B=,6 (<=H2B00 @<>6)6 68

; B' ;AB' UB, @' >D ; EB0:' > ,H2B' ;<' ?, @' > ;AB ' ;AB' AB,E B ' , ; ??B 0' ;A, ;' ;AB@' A,=' B =B,E<> B=' ;<' 0,EB:' = <FFB=' ;AB ' H@' ;AB' U,@0 =B' , =' 0; >DD2B=' < U, =:' HB B ;' < ' ;AB' B , ;' < ' ;AB ' 2 ;;2B' F <FB ;@ 6' "< ;> , ;B2@' ;AB' UB, ;AB ' < ' ;AB' 0;' B DA;' =,@0' , ;B ' ;AB' BE,?>, ; < ' < ' < H ,' U,0' U, ' , =' = @:' 0<' ;A, ;' ;AB' > A,FF@' >2; ;>=B' A,=' ,2 <0;' B,?AB=' % 0H< ' HB < B' ;AB@' HBD, ' ;<' 0> B ' , @' ?< EB B ?B' < ' ;AB' ?;<HB ' , 06

& A 2B' ;A 0' BW<=>0' U,0' D< D' < :' ,> > =80' % DA;' * E 0 < ' 0;<<=' > =B ' , 0' < ' ;AB' < ;AB ' 0 =B' < ' ;AB' ? ;@:' UA 2B' ;AB' 0 W' BD B ;0' < '$; 0A' A< 0B:' ' ;AB' BW; B B' B, D>, =:' UB B' H ? B Y D' U ;A' 1 ,00B ,80' 0M>,= < 0' ' ;AB' F2, ' ;<U, =' "< <06' ' ;A 0' =,@' ;AB' 1 , 0A,2' A,=' 0; B D;AB B=' A 0' E, ' U ;A' ,2 <0;' ;AB' UA<2B' < ' A 0' ?,E,2 @:' A,E D' ,==B=' ;<' , ;B < W80' = E 0 < :' UA ?A' A,=' A ;AB ;<' < B=' ;AB' ,=E, ?B:' <0;' < ' 1 < ;H > 80' B0B EB' < ' = ,D<< 0:' , =' %, <;;B80' 2 DA;' H D,=B' < ' ;AB' P;A' < F06' A 0' H<=@' < ' ;A ;@ <> ' 0M>,= < 0' U,0' ,2;<DB;AB ' ;<<' 0; < D' < ' ;,F2B;< ' <;;< 0' ;A BB' H D,=B0:' UA<' A,=' ;<' D EB' U,@' UAB BEB ' ;AB@' UB B' 0B <>02@' F B00B=6 U<' 2B0' <>;0 =B' < H ,' ;AB' $; 0A' A< 0B' U,0' = E =B=' ;<' ;U<' ?<2> 0C' * B' (B@80' AB,E@' = ,D<< 0' ? <00B=' ;AB' 1 < =BD<' ,' ,' < =' <FF<0 ;B' +B B ,:' 2,=B' , =' 0< 80' 2 DA;' = ,D<< 0' , =' A>00, 0' H@' , <;AB ' ,;' 2? ,=,:' B, B ' ;<' ;AB' ? ;@6' ;' ;AB' 0, B' < B ;' ;AB' % DA;' * E 0 < :' UAB ' ;AB' B B @80' A< 0B' ?, B' ' 0 DA;:' B; B=' ;A <>DA' < H ,:' ? <00B=' ;AB' H =DB:' , =' F B00B=' >F' ;AB' ,0?B ;' ;<U, =0' < =B W,:' ;A >0; D' HB < B' ;AB ' ;AB' B, D>, =' < ' HB2,;B=' >D ; EB0' UA<' A,=' < 2@' ,=B' >F' ;AB ' =0' ;<' =BF, ;' ,;' ;AB' 2,0;' F<00 H2B' < B ;6' ;' 0' 0, =' ;A,;' ;AB' H2<? ' ' < ;' < ' ;AB ' Ug0' 0< D B,;' ;A,;' ,> > =80' BD B ;0' U<>2=' A,EB' HBB ' ' ,' 0 ;>,; < ' < ' 0< B' =, DB :' ' ;AB@' A,=' HBB ' ??<0B2@' <22<UB=' H@' " B ?A' , ; @:' , =' < ?B=' ;<' ;> ' H,? ' ;<' =B B =' ;AB 0B2EB06' $>;' <;A D' < B' ;A, ' ,' ; <<F' < ' = ,D<< 0' U,;?AB=' ;AB ' F,00,DB' < ' ;AB' H =DB' , =' ;AB ' B; B,;' ;<' < Y =B W,:' , =' <;' ,' 0A<;' A,=' ;<' HB' B=6

;' U,0' <;AB U 0B' U ;A' ;AB' ?,E,2 @' ?<2> ' ?< F<0B=' < ' 2,=B80' , =' 0< 80' H D,=B0C ;AB@' UB B' ??<0B2@' <22<UB=' H@' ;AB' H>2 ' < ' ;AB' " B ?A' ?,E,2 @:' , =' A,=' ;<' ;> ' ,;' ;AB' < =' ;<' A<2=' H,? ' ;AB ' B,DB ' F> 0>B 06' U<' 0M>,= < 0' < ' ;AB' (B , ' >00, 0'

' ' # ' . # * ' A 'C

;<' F2> =B :' < 2@' A,2 B0; , B=' H@';AB ' < ?B 0:' , @' < ' UA< ' N< B=' ';AB' 0F< ;6' '2,;B' ?< B ' < ';AB', ;22B @' 0,@0';A,;' AB' 0,U' < B' < ?B ' H B, D' <FB ' ,' =<< ' U ;A' ,' F ? ,W?J' , =' , <;AB ' F2,? D' ,' 0B ; @' ,;' ;AB' =<< ' < ' ,' 0A<F' UA ?A' AB' U 0AB=' ;<' B0B EB' < ' A 0' <U ' FB 0< ,2' F 22,DB 6' AB B' U,0' U =B0F B,=' = > B B00:' 0< B' , 0< :' , =' , ' B < <>0' , <> ;' < ' 0?A BE<>0' , =' U, ;< ' U,0;B6' ;' U,0', ;B U, =0' 0, =';A,;' C> <;80' ?< F0' =B0; <@B=' ';UB2EB' A<> 0', ', <> ;' < ' <<=';A,;' U<>2=' A,EB' 0> ?B=' ;<' 0>FF2@';AB' UA<2B' , @' < ';A BB' UBB ';' 0', ;', @', ;B' ?B ;, ';A,;' < H ,' U,0' >22' < ' F <E 0 < 0' UAB ' ;AB' " B ?A' , EB=:' , =' ;A,;:' UAB ' < =B ' U,0' ;, = 2@' B0;< B=:' < 2@',' BU' =,@08' ?< 0> F; < ' ?<>2=' HB' 0? ,FB=' ;<DB;AB ' ;<' 22';AB' B F;@' U,DD< 0' HB < B' ;AB' A<0;' , ?AB=' < 6' 1,00B ,' ,DB=',D, 0;' C> <;' < ' <;' A,E D' BF;' A 0' B ' 'A, =:' @B;:' ' +< ;>D>B0B' , ,; EB0', B' ;<' HB' ; >0;B=:' AB' 0B;' ,0' H,=' , ' BW, F2B',0' , @' = 0< =B 2@' ?< 0? F;:' 0 ?B' AB' BM> 0 ; < B=' < ' A 0B2 ' <>;' < ' ;AB' ' EB 0 ;@' H> 2= D0',22';AB';B2B0?<FB0', =' ,;AB ,; ?,2' 0; > B ;0:' , =' = 0; H>;B=' ;AB ' , < D' A 0' 0;, 06' AB' F 22,DB' U,0',0' U, ;< ' , =' <HNB?;2B00' ,0' ;' U,0' ;A< <>DA7' ;AB' ;< H0' < ' ;AB' D0' ';AB' ?A> ?A' < ' , ;,' >R' UB B' H < B ' <FB :' ;AB' ' EB 0 ;@' 1>0B> ' , =' 2,H< ,;< B0' U B? B=:' , =',22';AB' ?A> ?AB0' U, ;< 2@' =, ,DB=' , =' =B0B? ,;B=6' AB B' U,0' <',;;B F;';<' B0;< B' < =B :' < ';<' >; 2 RB';AB' ?,F;> B=' F <FB ;@' < ';AB' DB B ,2' D<<=' < ';AB', @:' ; 22';AB' P;A' < F0' , ?AB=' ' < ';AB' BW;' =,@6' #EB ';AB0B' 2,;B ' ?< B 0:' A<UBEB :' ?<>2=' <;' HB' B0; , B=' < 'N< D' ';AB' F2> =B 6' AB' <H' < '0<2= B 0' ;A B,;B B=' ;<' 0A<<;' ;AB' ?< 00, @ DB B ,20' %, HB ;' , =' %, B>E 22B:' UAB '_;AB@' HBD, ';<' F>;' D>, =0' <EB ';AB' B, 2@' B F; B=' 0;< BA<>0B06

AB' 0;,;B' < 'A 0', @' < ';AB' 0;', =' =' ?;<HB' 0> ? B ;2@' BWF2, 0';AB' ?< =>?;' < ' 1,00;A ,' ' B , D' < ';AB' F> 0> ;

T <2< B2')<B280' 9 :2% (' 3 ' %('FF6 6

T B',>;A< ;@' < ';A 0' 0;,;B B ;' 0';AB' +< ;>D>B0B' B BD,=B' (B B ,2' +, F2< ,:' UA<' 0B EB=' < ' ;2 B' 1, 0A,280' 0;, 6' BB' F6 ' < ' A 0' @)% :' (:' 3%(') 5 %(' .%(' & 5 (' B,' R ':5 3' +, F2< ,' ,==0' ;A,;')?@' B >0B=';<';, B';AB' F B0B ;' < ',' 2, DB';B2B0?<FB:' UA ?A' 1,00B ,' 0B ;' A ',0' ,' F <F ; ,;< @' D ;6' '2B00' ?B ;, ',>;A< ;@' 0,@0';A,;' ;AB' 1, 0A,2' ?,>DA;' ';AB' 0; BB;',' F2> =B B' U ;A',' H, B2' < ' H>;;B :', =', <;AB' U ;A' ,' ?AB0;' < ' U,W ?, =2B0:', =' 2B;' ;AB ' < ' F> 0A B ;' < ' ?< = ; < ' ;A,;' ;AB@';<< ' ;AB ';<' A 0' <U ' M>, ;B 0Q < , <' =,' %>R:' 6 F6 5 6

L 1 #) 8 ' * ' $ O

< ' & B22 D;< 8Ø B, D>, =6 $>;' AB' U,Ø ,20<' 0< BUA,;' F>RR2B=' ;<' =B;B B' ;AB' F<2 ?@' UA ?A' AB' >0;' <U' ,=<F;6 *<U ' ;<' ;AB' 2,0;' < B ;' AB' A,=' ;A<>DA;' ;A,;' & B22 D;< ' U<>2=' A,EB' <>DA;',;'"< <0:' < '0< B' <;AB '0>?A' F<0 ; < :';<' =B B =' < H ,6 =' BEB ' UAB ' < H ,' U,Ø BE,?>,;B=:' AB' A,=' ,D B=' ;A,;' AB' DA;' =';AB' B B @'= ,U ' >F';<' = 0F>;B';AB' F,00,DB' < ';AB' 1 < =BD<6 $>;' ;' U,Ø <U' ?2B, ';A,;' & B22 D;< ' U,Ø ' >22' B; B,;' < '% 0H< 6 ?B';AB' 1, 0A,Z U,Ø 0; 22' D < , ;' < ';AB' BW 0;B ?B' < ';AB' 2 BØ' < ' < BØ' . B= ,0:' UA ?A' U,Ø' < 2@' BEB,2B=' ;<' A ' <> ' =,@Ø' 2,;B :' AB' U,Ø 0< BUA,;' > ?B ;, ' A<U' ;<' ;B F B;' ;AB' ?< =>?;' < ' A Ø' ,=EB 0, @6 ;B ' ;AB' E D< <>Ø' 0;, =';A,;' & B22 D;< ' A,=' ,=B' ,;' $>00,?<:' ;'0BB B=' =, DB <>Ø' ;<', D>B';A,;' AB' >0;' <U' HB' ' AB,=2< D' 2 DA;' < ' A Ø' 0A F0:' , =',H<>;' ;<' BE,?>,;B' +< ;>D,26 ! B;' ;AB' ,F = ;@' < 'A Ø' B; B,;' 0BB B=';<', D>B' 0< B' 0>?A' F> F<0B6 >DA;' AB:';AB B < B:';<' HB' F> 0>B=' U ;A<>;',' < B ;8Ø=B2,@:' ' < =B ';A,;' A Ø' B H, ,;< ' DA;' HB' ,=B' = 2 ?>2;' Z A 0' ?< 8ØB:' ;' Ø' 0, =:' U,Ø ,=E<?,;B=' H@' B@ B :' 1 < ;H > :' " < :' , =' ;AB' +< ;>D>B0B' B BD,=B' =8 2< ,6 ' ;AB' <;AB ' A, =:') B@' , =' C> <;' H<;A' ,=E 0B=' ,' 0;,@' ,;' < H ,:' ;<' B0;';AB' , @:' ?<22B?;' F <E 0 < 0:' , =:' UA,;' U,Ø <0;' F< ;, ;' < ',22:';<' B<FB ' ?< > ?,;< Ø' U ;A' 2 B =,:' >=,=' <= D<:' , =' ;AB' 5';A' < F0:' UA ?A' U,Ø' <U' =>B' < ';AB' F, 0A' < ; B 6 AB@' F< ;B=' ;<' ;AB' = 0AB=' 0; B D;A' < ';AB' , @:' UA ?A:' A,E D' 2<0;' O:P ' B ' ,;' $>00,?<:' , =' O: ' < B' H@';AB' A, =' , ?A D' , =' F<< ' BB= D' < ';AB' 2,0;' < ;A:' U,Ø <U' B=>?B=';<' 0< B' 4: ' B 6 AB' DA; D ' F<UB ' < ' & B22 D;< ' U,Ø' < =,H2B:',Ø' AB' A,=' 0A<U ' ,;' $>00,?<:' UAB B' , @' < ';AB' " B ?A' < ?B Ø' FB 0 0;B=' ' HB2 BE D' ;2 ,;' AB' A,=' 0A<U ' > HB Ø' 0>FB < ';<';AB ' <U V ' UA ?A';AB@' B B=6 ' A,0;@',=E, ?B:' ;' U,Ø' > DB=:' DA;' H D';AB' E,=B Ø' ' ,?B' < ' ,' 0B?< =' $>00,?<:' UAB B' ;AB B' U,Ø' <' ?A, ?B' < ' ,' ;> D' <EB B ;6 & <>2=' ;AB' ?< , =B ?A B ' U 0A' ;<' ,??BF;' , <;AB 'H,;;2B' < ';AB' 0, B' 0< ;' Z ;' U<>2=' HB' HB;;B ' ;<' B0;,H2 0A' ,' BU' H,0B' ,;' < H ,:';<' H D' >F' ;AB' 5;A' < F0' < ' ;AB' B, :' , =' < 2@' ;<' <EB' < ' UAB ' ;AB' , @' U,Ø ;A< <>DA2@' B< D, RB=6 1 B, UA 2B' ,' =B;,?A B ;' DA;' =B < 0; ,;B' ,D, 0;' F< ;<:';<' = 0; ,?;' & B22 D;< 8Ø ,;;B ; < ' ' A Ø' U,0

' " < :' ' A Ø' ,??<> ;' < ';AB0B' =BH,;BØ IFF6 4 J:' < DB;Ø ;A,;' ;AB' BW 0;B ?B' < ';AB' % BØ' < ' < BØ' . B= ,Ø U,Ø 0; 22' > <U ' H<;A';<' 1,00B ,

O P‘ # # ‘ ‘ # ‘ . # * ‘ A ‘2 ;AB‘ F<2 ?@‘ ;A, ;‘) , F<2B< :‘ ;U<‘ < ;A0‘ , ;B :‘ =B?2, B=‘ ;A, ;‘ 1 , 00B ,‘ 0A<>2=‘ A, EB‘ ,=<F;B=6‘ K & A@:8‘ AB‘ ,0 B=:‘ K = =‘ ;AB‘ + ?B‘ < ‘ #002 D:‘ , ;B ‘ A 0‘ , 2> B‘ , ;‘ $>00, ?<:‘ F> 0>B‘ ;AB‘ , ?A‘ < ‘ % 0H< :‘ 0;B, =‘ < ‘ ; , D‘ >F‘ ,‘ F<0 ; < ‘ < ‘ ;AB‘ 1 < =BD<:‘ , =‘ B0;< D‘ A 0‘ ?< > ?, ; < 0‘ U ;A‘ 2 B =, ‘Z ‘ A, =‘ <;‘ H> Y =B B=‘ A ‘ U ;A‘ < =B 0‘ < ‘ 0; >?; < 0:‘ , =‘ AB‘ ?<>2=‘ 0BB‘ ;A, ;‘ ;AB‘ # D2 0A‘ UB B‘ <;‘ B, 0@‘ ;‘< HB, ;68‘ 1 , 00B ,8‘ 0 ,=E<?, ;B:‘ "<@:‘ BF2 B=‘ ;A, ;‘ K ‘ ;AB‘ @‘ < ‘ +< ;>D, ‘Z A, =‘ HBB ‘ A, 2; B=‘ < _‘ ;AB‘ 1 < =BD<:‘ @<> ‘ 1 , NB0;@‘ U<>2=‘ A, EB‘ 0, =‘ ;<‘ ;AB‘ + ?B:‘ & A@‘ = =‘ @<>‘ <;‘ , ?A‘ < ‘ ‘Z AB‘ # D2 0A‘ U<>2=‘ A, EB‘ B B H, B=:‘ ‘ ;AB@‘ A, =‘ HBB ‘ F B00B=68‘ <‘ UA ?A‘) , F<2B< :‘ U ;A‘ ,‘ H <, =‘ 0 2B:‘ , 0UB B=:‘ K . B @‘ ; >B7 ‘ F <H, H2@‘ 0A<>2=‘ A, EB‘ 0, =‘ 0<‘ 68 AB‘ F <H2B ‘ F B0B ;B=‘ ;<‘ ;AB‘ 1 , 0A, 2:‘ =BB=:‘ U, 0‘ <;‘ , ‘ B, 0@‘ < B6‘ ‘ AB‘ B , B=‘ , ;‘ < H , :‘ A 0‘ B B B0‘ U<>2=‘ =B2, ;B‘ A ‘ ;<‘ ;AB‘ # FB < ‘ < ‘ ; = ;@7 ‘ AB‘ , =E, ?B=:‘ AB‘ DA;‘ =‘ ;A, ;‘ AB‘ A, =‘ > =B ; , B ‘ , ‘ ; , 0 ‘ ;<<‘ D B, ;‘ < ‘ A 0‘ 0; B D;A6‘ AB‘ FB 0< ,‘ BM>, ; < ‘ 0B;; 2B=‘ ;AB‘ = ?>2;@6 1 , 00B ,‘ U, 0‘ <H0; , ;B‘ , =‘ B ;B F 0 D‘ ;<‘ ;AB‘ EB DB‘ < ‘ ;B B ;@6‘ B‘ B0<2EB=‘ ;<‘ D<‘ < :‘ , ;‘ ;AB‘ B, 2 B0;‘ F<00 H2B‘ < B ;:‘ ‘ ;AB‘ A<FB‘ < ‘ < ? D‘ & B22 D;< ‘ ;<‘ ,‘ H, ; ;2B‘ < ‘ D <> =‘ 2B00‘ , E<> , H2B‘ ;A, ‘ $>00, ?<:‘ < ‘ < ‘ ?< FB22 D‘ A ‘ ;<‘ B H, ‘ U ;A<>;‘ , @‘ DB B ,‘ Z B D, DBY B ;‘ , ;‘ , 226‘ U<‘ =, @0‘ < 2@‘ UB B‘ 0FB ;‘ , ;‘ < H , 6‘ ‘ ?;<HB ‘ :‘ 1 < ;H > 80‘ ?, E, 2 @:‘ , ;B ‘ , D‘ , ‘ B?< , 00, ?B‘ , 0‘ , ‘ , 0‘ ;AB‘ 0B, ‘ , =‘ ;AB‘ F< ;‘ < ‘ " D>B ,:‘ ? <00B=‘ ;AB‘ 1 < =BD<‘ ;<‘ . 22, ‘) <E, ‘ =B‘ ?<0:‘ UA 2B‘ ;AB‘ ;A8‘ < F0:‘ AB, =B=‘ H@‘ , ;B ‘ < W8‘ 0 = , D<< 0:‘ <??>F B=‘ < =B W, 7‘ < B‘ = E 0 < ‘ < ‘) B@8‘ 0 ?< F0‘ <22<UB=‘ ;AB 6‘ AB‘ B0;‘ < ‘ ;AB‘ P;A‘ < F0‘ , =‘ B@ B ‘ , =B‘ B, =@‘ ;<‘ B0> B‘ ;AB T_‘ , =E, ?B6 ‘ < ‘ F <H2B ‘ B , B=‘ ;<‘ HB‘ B0<2EB=6‘ A<>2=‘ ,‘ 2, DB‘ D, 0< ‘ HB‘ 2B ;‘ ‘ < H , :‘ , =‘ ,‘ BU‘ H, 0B‘ < ‘ ;AB‘ , @‘ B0;, H2 0AB=‘ ;AB B‘ Z AB‘ 1 , 0A, ‘Z A, =‘ 0A<;‘ ;<‘ ;AB‘ ?< EB ;‘ < ‘ , ;, ‘ 2, ,‘ : ‘ $>00, ?<‘ U<> =B=:‘ , =‘ : ‘ 0 ? ‘ B 6‘ AB B‘ U, 0‘ , ‘ , ??> >2, ; < ‘ < ‘ U, DD< 0‘ < ‘ ;AB‘ ?< F0 ; , 0‘ , =‘ ;AB

, =‘ A 0‘ 0>H< = , ;B06‘ <‘ =<B0‘ * B2, D , EB‘ IFF6 5 OJ6‘ $>;‘ + B2B;:‘ 1 , 00B ,80‘ ?< =, ;:‘ 0‘ F<0 ; EB‘ ;A, ;‘ ;AB@‘ UB B‘ 0;‘ AB, =‘ < ‘ < ‘ F 0< B 0‘ ;, B ‘ , ;‘ + < H, ‘Z < ‘ ?;6‘ P:‘ ;U<‘ =, @0‘ , ;B ‘ ;AB‘ , =E, ?B‘ A, =‘ B?< B ?B=6 ‘ "<@80‘ >;B0‘ < ‘ A 0‘ ?< EB 0, ; < ‘ U ;A‘ ;AB‘ # FB < ‘ < ‘) <E6‘ :‘ 0B ;‘ H@‘ 2 ‘ ;<‘ 1 , 00B ,:‘ ‘ A 0‘ 2B;; B ‘ < ‘ * B?6‘ O6‘ BB‘ FFB = W‘ ;<‘ "<@80 %‘ 3 ' % H@‘ (<=‘ =B‘ %8 :‘ F6‘ O 6

O # # ' ' # ' . # * A ' F

A 0B2 ' ; A , ; ' ' AB' ?<>2=' H> ; ' ? , ; ?A' , =' HB , ; ' ; AB' D2< +< ; >D>B0B' , @:' , ' 0 , 22' = 0 , 0 ; B ' ' A 0' B , ' U<>2=' HB' < D EB ' A 6' ' 2 B' & B22 D ; < :' AB' U , 0' K ; , D' 0 08 6

' ?;<HB ' O' ; AB' " B ?A' , @' , =B' ; 0' BD>2 , ' 0 ; , ; ' < ' < H , ' 7' ; AB' P ; A' < F0' ? , B' <> ; ' ; <' . 22 , ' +<>?, ' , =' < =B W , ' < ' ; AB' +< H , 2' <, =:' ; AB' =' < F0' ; <' . B =, ' =<' BD< ' < ' ; AB' ? , <' <, =:' UA ?A' > 0' F , , 22B2' U ; A' ; AB' <; AB :' ; B ' 2B0' ; <' ; AB' B , 0 ; :' , =' N< 0' ; ' , ; ' %B , :' 1 < ; H > 80' ?, E , 2 @' F>0AB=' ' < ' <> B:' ; <' F2 , ?B' ; 0B2 ' ' < ; ' < ' ; AB' ; A' < F0:' UA ?A' <U' <EB=' < ' < ' < =B W , ' , 0' ; AB' AB , =' < ' ; AB' , ' , ; @' ?<2> 6' ; 0' 0?<>; 0' ; A , ; ' BEB D' H ? B B=' ' < ; ' < ' +< H , 2' U ; A' 0< 80' 2 DA ; ' ?, E , 2 @:' UA ?A' U , 0' ?<EB D' ; AB' B; B , ; ' < ' ; AB' , 22 B=' , @6' AB' ; U<' =, @0' UA ?A' ; AB' " B ?A' A , =' 0FB ; ' ' F2> =B D' < H , ' A , =' , 22<UB=' ; AB' D2< +< ; >D>B0B' , ; @' ; <' DB ; ' , ' 0 ; , ; ' UA ?A' ; AB@' BEB ' 2<0 ; 6' ; AB@' BEB ' 0 , U' ; AB' B B @' , D , ' => D' ; AB' B0 ; ' < ' ; AB' B; B , ; 6' A , ; ' DA ; ' & B22 D ; < 80' AB , =' M> , ; B 0' UB B' , ; ' %B , :' UA 2B' 22:' > F> 0>B=' H@' , @' A<0 ; 2B' < ?B:' U , 0' , ; ' A< , 6' " < ' ; AB' BW ; ' 0 W' =, @0' ; AB' $; 0A' F> 0>B=' , ' 2B 0> B2@' ?<> 0B' ; <U , =0' ; AB' % B0:' , 2< D' ; AB' ; A BB' <, =0' A< , , ; , B . 22 , ?, :' UA ?A' U , 0' ; , B ' H@' 227 2?<H , , , 2=, 0 < B0' . B= , 0:' UA ?A' U , 0' ; , B ' H@' + ?; < 7' , =' %B , $, ; , 2A , 2B M>B :' UA ?A' U , 0' ; , B ' H@' FB ?B :' %B ; A:' , =' <2B6' ; ' U , 0' , 2< D' ; AB' 2 , 0 ; , B=:' ; AB' ?B ; , 2:' <, =:' ; A , ; ' , > > =80' , ; @' , =' ; AB' ; A BB' ?, E , 2 @' H D , =B0' <22<UB=' ; AB' , ' H<=@:' , ; ' ; AB' = 0 ; , ?B' < ' , ' =, @80' , ?A6' 0< 80' 2 DA ; ' ?, E , 2 @' H <>DA ; ' >F' ; AB' BW ; B B' B, :' , =' U , 0' , 2 <0 ; ' ; AB' < 2@' > ; ' UA ?A' 0 , U' ; AB' B B @' HB ; UBB ' ; AB' O ; A' , =' ; AB' ; A' < ' ?;<HB 6' AB' B0 ; ' < ' ; AB' , 22 B=' , @' A , =' ?< F2B ; B2@' <>; , ?AB=' 1 , 00B , 6' ; 0' B ; B , ; ' U , 0' , B=' H@6' 0< B' = 0< =B 0' ; AB' 0 DA ; ' < ' ?A' < , 0 ; B B0' 2 B' 2?<H , @ , ' , =

T' 2 B' HB0 ; ' 0> D' >F' < ' ; AB' 1 , 0A , 28O' B0<2EB' , @' HB' <> =' ' "<@8O' >; B' F B0B ; B=' ; <') , F<2B< ' < ') <E6' G' K' %B' F ?B' 8 , ' F , 0' F>' 0B' B0<>= B' , ' , B' > ' < ; ' =B ; , ?2 B B ; ' 2< 0M>8 2' =BE , ; ' 2 E B ' 0<>0' FB>' =B' N<> 0' > B' H , ; , 22B' =B? 0 EB' , ' > B' , BB' =BNC' E ?; < B>0B' B ; ' =B>W' < 0' F2>0' < H B>0B' XQC' M>B' 2 , ' <; B6' %B0' =, DB 0' M>B' ?<> , B ; ' 0B , ' , 2 , =B0' F ; ' , 2 DB' 0< ' ?<B> :' , 0' 2' , ' FB 0B' M>B' 2 , ' ? , ; B' =B' FB = B' 8A<F ; , 2' B' =BE , ; ' F , 0' , B ; B ' 2 , ' ? , F , D B6' I"<@80' H %' 3 ' %' FFB = W:' F6' O 6J

T' A<>DA' 2 , =B80' H D , =B' A , =' ; AB' B , D> , =' < ' ; AB' 4 ; A:' , =' U , 0' B D , DB=' < ' ; AB' ; A' , 20<:' 0< 80' < 2@' U , 0' ' ; <>?A' U ; A' ; AB' " B ?A' < ' ; AB' O ; A P ; A:' , =' , D , ' < ' ; AB' 5 ; 2 ; A6

$>;' , ;' = B,=B=' =B2,@:';A D' ;A,;' 1,00B ,' DA;' 0B =' H,?';<<F0';<' < H ,:' UAB ' AB' <> =';A,;' &B22 D;<' U,0' B; D',0' ,',0'%0H<6' & ;A<>;' U, ; D' <'A0'?<22B,D>B0:'AB' , ?AB=' ,;' ==,@' <' 1B,2A,=,';<"< <0'<';AB'4;A:', =' A,=';AB'D<<=' <;> B';<'0 F 0B', ='?,F;> B';AB' 0D ?,;' " B ?A'F<0;',;';A,;'E22,DB'6 <;',' ,'BO?,FB=6' B'U,0'<U' <2@'B DA;' 2BO' <' <H ,:', ='U,0',H2B';<'>0A'=<U' ;<';AB' ?;@' ';AB'B, 2@', ;B <<'HB<B'A0', E,2'U,0' <U 6' B'A,=' U;A'A '<B'UB,'0M>,=<'<'BD>2,'=,D<<0:', ='0W' 2;,' H,;;,2<0:'A,E D'HBB'N< B='0 ?B' BF;B HB' 5;A'H@',22'A0' 0;,DD2B0', ='0< B'<>;2@ D'> ;06' AB'UA<2B' ,=B',H<>;'O: ' B'A' "< B=' ';U<'?<2> 0:';AB@'?A,DB=' ;<' < H ,'H@' ;0';U<' <;AB ' B ; ,?BO:'0UBBF D',U,@';AB'0 ,22' " B ?A' D>,=0',';AB'D,;B06' AB'0M>,=<'<'?,E,2@';AB'D,22<FB=',2< D';AB'0; BB;'F, ,22B2'U;A';AB' EB :', ='0B RB=';AB'H =DB:';A>0' ?>;; D'<';AB'?< > ?,;<'HB;UBB';AB' " B ?A' ';AB';<U' , ='<A<0B',';AB'?< EB ;'<' , ;,' 2, ,:'UAB B';AB'U<> =B='2,@6' AB'0 ,22'D , =D>,8=:'UA?A';AB'B B @' BF;' 0=B';AB'F2,?B:';<<' B >DB' ';AB'H 0A<F80'F,2,?B:'H>;'U,0'<?B=';<'2,@'=<U' ;0', 0',';AB'B ='<', A<>6' AB' B',;';AB'?< EB ;:' N< B='H@' ,@'<';AB'?<E,2B0?B ;0:' BF;'>F',' B'<',0A<;' ; B:'H>;'0> B =B B=' ,;'=0?B;<:'<' , ;80'F< 0B';<' F<;B?;';AB ' <';AB'>@'<'A0'; <<F06' B'U,0:'> < ;> ,;B2@:' <;' B ; B2@',H2B';<' B=BB'A0'F< 0BG';AB' <H ,'2<?,2' BD B ;'U,0'0<B ,DB=',;';AB'0;,;B' 'UA?A';' <> =';0' ,;EB';<U';A,;';' 0A, =2B='0< B'<';AB'F 0<B0VBDA;', B' 0, =';<'A,EB'HBB'02, 6' AB';<;,2'2<00'<';AB'+<;>D>B0B' =E0<'U,0';A BB' 22B=', ='<B'<?B', ='UB ;@ EB' B' U<> =B=6

& 20<', ='1 22B'?, B'>F' BW;'=,@:', ='0UBBF D';AB'<,=0' ;<U, =0' <=BW,', ='+< H,2:'F?B='>F' '<B'0; ,DD2B0' , =' ,,>=B0' <';AB';,2'<'1,00B,80' ,?A D'?<2> 6' , ;'A, =B='<EB'<H ,';<';AB :', ='BO?<;B='A0'F 0<B0' ;<' F<;<'U;A'A0'<U'=E0<6 ;AB B'UB B' :4'0?', =

T AB'H D,=B'U,0' <;'?< F2B;B:';AB'"B ,'H,;;,2<'A,E DV0<BA<U' <';<;AB VD<;';<'%0H<6' $>;'+< ;<:'+B , B2:' <H ,:' EB <:'1, ,:' , ='," ?< H B='H,;;,2<'<'2DA;'?< F, BO'UB B',FF, B ;2@'F B0B ;6 ' BB' , ;80'=0F,;?A';<'$B B0<='<, <'=,'%>R:'E :' FFB=W:' F6' 6

U<> =B=:' < ' UA< ' A , 2 ' ?<>2=' , ?A:' UA 2B' ;AB' B0;' UB B' ; , B ' <2 ' ' ?, ;O6' ', H2B H<= B=' B ' <;' < B';A, 'O '0<2= B 0' UB B' ; , B 'G H>;'0< B'A> = B=0' < '?< 00, ,;', ='A<0F ; ,2' B F2<@B0' , =' B '< ';AB'; , 'H <>DA;'>F';AB';<; ,2' D> B0' < ';AB'F 0< B 80' ;<' O: ' B 6' , ;' A,0' HBB ' ,??>0B=' H@' 0< B' " B ?A' U ;B 0' ' < '=B2 HB , ;B2@' BWF<0 D' A 0'?, F; EB0';<';AB' > @' < ';AB'FB,0, ; @:' , =' F, ,= D' ;AB' U<> =B=' ' , ' =B?B ;' ,0A < ' ;A <>DA' ;AB' 0; BB;0' < ' F< ;<6' $>;';AB'A, =0< B';B0; < ,2';<'A 0'A> , ;@' 0 D B=' H@',' ?< ;;BB' < '" B ?A' < ?B 0:' UA ?A') ,F B ' F ;0' ' ;AB' FFB = W' <6' ' ;<' A 0' ;A =' E<2> B:' 0' B <>DA' ;<' F <EB' ;A, ;' , ;' = =' A 0' HB0;' < ' A 0' F 0< B 0:' , =' ;A, ;' ;AB' > < Y ;> , ;B' ? =B ;' UA ?A' <??> B=' N>0;' , ;B ' ;AB' 0> B =B ' >0;' <;' HB' 2, =' ;<' A 0' ,??<> ;'W

1 ,00B ,80' , @' B?B EB=' ;AB' BU0' < ' ;AB' ,22' < ' < H ,' U ;A' = D ,; < 6' ;' F <=>?B=' ,' F, >2:' F B00 < ' < ' BEB @' =7' , =' UA 2B' ;AB' , ' , =' 2B' > > B=' , ;' ;AB' 1 , 0A, 28' ? >B2;@' ' ,H, =< D' ;AB ' ?< ,=B0' ;<' =B, ;A V ' < ' ;' U,0' ,20B2@' BF< ;B=' ;A, ;' ;AB' +< ;>D>B0B' A, =' ,00,? B=' ;AB ' ,22 V ;AB' < ?B 0' H2, B=' A 0' H2 =' F <E =B ?B:' , =' <H0B EB=' ;A, ;' ,' H D, =B' DA;' UB22' A, EB' HBB ' 0F, B=' ;<' F <;B?;' <;' < 2@' ;AB' A<0F ; ,20' H>;' ;AB' E, 2>, H2B' H, 0B =BF<;' HBA =' ;AB

AB B' U,0' AB, E@' 0 0A D' HB;UBB ' ;AB' $; 0A' B, D>, =' ?, E, 2 @' , =' 1 < ;H > 80' , =E, ?B:' H<;A' < ' ;AB' ;A' , =' 5;A' < ' ?;<HB 6' ' ;AB' 0;' < ' ;AB0B' =, @0' ;AB' A< 0B , ; 22B @' ; <<F' , ; ; , ?AB=' ;<' 0< 80' H D, =B' U, 0:' H@' 0< B' BW; , < = , @' 0; , B:' 2B ;' B ?, FB=' <>;' ' < ;' < ' ;AB' 0M>, = < 0' UA ?A' UB B' ;<2=' < ' ,0' ;0' B0?< ;:' , =' U,0' B, 2@' 0> F 0B=' ' 2?<B ; B' H@' ,

!' @ (' < ' BW, F2B' *B2, D , EB:' F6 54:' , =' " <>:' F6 4 6

T' , ;' =B2 EB B=' B, 2@' O ' $; 0A' , =' +< ;>D>B0B' U<> =B=:' UA< ' & B22 D;< ' A, =' HBB ' <H2 DB=' ;<' 2B, EB' HBA =' , ;' < H ,:' ,0' < ; , 0 ' F< ; , H2B6

^ F > D2 ' U ;B0:' > =B ' ?;6 4:' ' A 0' * , @6 K' %< 0M>B' 2B' 0< ;' =B0' ,2AB> B>W' ,H, =< B0' ,' < H B' >;' ?< >' =, 0' 8, BB:' < ' > > ,' A,>;B B ;' ?< ; B' 2B' + ?B' =8#002 D6 ' M>,2 ,' =B' ?<>F, H2B' B ;B;B' B ;' B;' =B' H, H, B' 0,' ?< => ;B' E' $>0, ?< B;' 8, H, =< ' =B0' H2B00B0' ,' < H B6 ' ,>;' ,E<>B ' M>B' 2B' , B?A, 2') B@:' 2B' DB B ,2' B@ B ' B;' 2B' =>B' =8 H , ;B0' B' B ;' B ' F<> ' , B' ?B00B ' ?B0' > > B0:' *B0' 2< 0' 8, BB' FB = ;' =B' 0,' < ?B:' F, ?B' M>B' 2B' DB B ,2 B ?AB ' 8, E, ;' F2>0' 2,' ?< , ?B' =B' 0B0' 0<2=, ;O68' 6 (> D B;:' F6 456

ʻ # # ʻ ʻ # ʻ . # * ʻ ʻ

, ?AB=ʻ < ʻ 2B M>B ʻ ;<ʻ U ;A ʻ ;ABʻ % B0:ʻ = 0; H>; Dʻ ;AB Y 0B2EBƠ ;<ʻ ;ABʻ ?, ;< B ;0ʻ UA ?Aʻ A,=ʻ HBB ʻ , , DB=ʻ < ʻ ;AB 6ʻ $>;ʻ ,> > =8Ơ , =ʻ +,? 8Ơ , ; @:ʻ UA ?Aʻ A,=ʻ A ;AB ;<ʻ HBB ʻ ?< F2B;B2@ʻ ?<EB B=ʻ H@ʻ ;ABʻ A< 0B B :ʻ = =ʻ <;ʻ <22<Uʻ ;AB ʻ BW, F2Bʻ U ;Aʻ M> ;Bʻ 0> ? B ;ʻ F < F; ;>=B:ʻ , =ʻ D<;ʻ B D,DB=ʻ ʻ, ʻ > B?B00, @ʻ 0 0A6ʻ ABʻ % DA;ʻ * E 0 < ʻ 0A<>2=ʻ A,EBʻ U ;A= ,U ʻ , ;ʻ << :ʻ H>;ʻ ,> > =:ʻ HB2 BE Dʻ ;ABʻ " B ?Aʻ , ; @ʻ ;<ʻ HBʻ 0; 22ʻ , ʻ ,U,@:ʻ , =ʻ =B0F 0 Dʻ ;ABʻ ?,E,2 @ʻ UA ?Aʻ A<EB B=ʻ , <> =ʻ A :ʻ B , B=ʻ ʻ 2B M>B :ʻ ;B = Dʻ ;<ʻ 0FB =ʻ , <;AB ʻ DA;ʻ ʻ ,ʻ = @ʻ ?, ;< B ;:ʻ < ʻ ;ABʻ ;< B ; ,2ʻ , ʻ UA ?Aʻ U,0ʻ ,22 Dʻ F < 0B=ʻ ,ʻ , ; D> Dʻ , ?Aʻ ;<ʻ A 0ʻ B 6ʻ ;ʻ <> ʻ <8?2<? ʻ ,>F 8Ơ , ; @ʻ ?, Bʻ >F:ʻ , =ʻ B D,DB=ʻ ;ABʻ F ? B;0ʻ < ʻ ;ABʻ % DA;ʻ * E 0 < ʻ ʻ ,ʻ 0 >0A6ʻ ,E Dʻ HBB ʻ 0; ?;2@ʻ < H ==B ʻ H@ʻ & B22 D;< ʻ ;<ʻ DB;ʻ B ;, D2B=ʻ ʻ ,ʻ B, D>, =ʻ ,?; < :ʻ , =ʻ B B Y HB Dʻ FB A,FƠ A 0ʻ BWFB B ?Bʻ ,;ʻ ;ABʻ <,:ʻ ,> > =ʻ ;, = 2@ʻ , =ʻ > U 22 D2@ʻ <EB=ʻ < 6ʻ $>;ʻ =>0 ʻ ?< Dʻ < :ʻ A 0ʻ ?<2> ʻ 00B=ʻ ;0ʻ <,=:ʻ ,A=ʻ 0;B,=ʻ < ʻ B; Dʻ ;<ʻ ;ABʻ 0B?; < ʻ < ʻ ;ABʻ % B0ʻ UA ?Aʻ ;ʻ U,0ʻ =B0; B=ʻ ;<ʻ <??>F@:ʻ HB;UBB ʻ ;ABʻ 1 < ;Bʻ D ,a:ʻ , =ʻ ;ABʻ E,22B@ʻ < ʻ ,2, = R:ʻ UB ;ʻ ;<<ʻ , ʻ ;<ʻ ;ABʻ UB0;:ʻ , =ʻ ?, Bʻ ʻ >F< ʻ ;ABʻ F<60 ; < ʻ < ʻ ;ABʻ 0;ʻ * E 0 < ʻ ʻ < ;ʻ < ʻ <H ,26ʻ A 0ʻ U<>2=ʻ A,EBʻ HBB ʻ =, DB <>0ʻ ʻ ;ABʻ " B ?Aʻ A,=ʻ A,=ʻ , @ʻ , ; @ʻ ;<ʻ ;ABʻ < ;:ʻ ;<ʻ ;, Bʻ ,=E, ;,DBʻ < ʻ ;ABʻ > <??>F B=ʻ D,Fʻ ʻ ;ABʻ 2 B0ʻ6 $>;ʻ .2< ;H > 8Ơ ,=E, ?B=ʻ D>, =ʻ A,=ʻ F B00B=ʻ < Bʻ ;A, ʻ ;A ;@ʻ 2BƠ ʻ < ;ʻ < ʻ ;ABʻ , ʻ H<=@ʻ < ʻ 1 ,00B ,8Ơ , @:ʻ , =ʻ ;A 0ʻ < ?Bʻ ?< ;, B=ʻ <;A Dʻ H>;ʻ ?,E,2 @:ʻ 0,EBʻ ;ABʻ 0 D2Bʻ H D,=Bʻ < ʻ ,>F V 2B0Ơ ;A, ʻ : ʻ B ʻ A 0ʻ < ?B:ʻ 0>?Aʻ ,0

ʻ "< ʻ ;A 0ʻ B,0< ʻ ;ABʻ = 0 ,2ʻ F ?;> Bʻ < ʻ ;ABʻ 0 ;>,; < ʻ = ,U ʻ H@ʻ),F B ʻ I 6ʻ 5J ʻ >0;ʻ HBʻ ?< 0 =B B=ʻ BW,DDB ,;B=6ʻ ABʻ " B ?Aʻ , ʻ , @ʻ U,0ʻ > ;AB ʻ< ʻ ;A, ʻ ABʻ ,D B07 ;ʻ 2 ,=ʻ <;ʻ F,00B=ʻ 2?<B ; B6ʻ ABʻ ?,E,2 @ʻ ?<>2=ʻ A,EBʻ =< Bʻ <;A Dʻ ,D, 0;ʻ ;ABʻ AB DA;0:ʻ , =ʻ , F 8Ơ H D,=Bʻ U<>2=ʻ A,EBʻ HBB ʻ ? >0AB=ʻ ʻ ;ʻ A,=ʻ B =B,E<> B=ʻ ;<ʻ B ;B ʻ ;ABʻ D,F6ʻ $>;ʻ ;ʻ BEB ʻ ?, Bʻ U ;A ʻ ;B ʻ 2BƠ ʻ < ʻ ;ABʻ BWF<0B=ʻ F< ;ʻ < ʻ ;ABʻ ;Aʻ , =ʻ ;A:ʻ <;ʻ A,E Dʻ F,00B=ʻ 2B M>B 6ʻ 8ABʻ % DA;ʻ * E 0 < ʻ = , 0;0ʻ =<ʻ <;ʻ ; B,;ʻ 0B <>02@ʻ ;ABʻ F<0 ; < ʻ UA ?2ʻ) ,F B ʻ F, ;0ʻ ʻ 0>?Aʻ D2<< @ʻ ?<2<> 06ʻ BBʻ %B,?A:ʻ F6ʻ 4 :ʻ , =ʻ < 0:ʻ F6ʻ 6ʻ 2 Bʻ % DA;ʻ * E 0 < ʻ ?<> ;B , ?AB=ʻ < ʻ <H ,2ʻ ;<ʻ >=,ʻ , =ʻ B,?AB=ʻ ;AB ʻ F <FB ʻ F<0;ʻ 2< Dʻ HB < Bʻ = DA;6ʻ AB Bʻ ;AB@ʻ F ? B=ʻ >Fʻ ,ʻ =B;,?A B ;ʻ < ʻ ʻ ?< E,2B0?B ;0ʻ , =ʻ B? > ;0ʻ < ʻ % 0H< :ʻ UA<ʻ A,=ʻ HBB ʻ U, ; Dʻ < ʻ ;AB 6ʻ < Dʻ ;AB0Bʻ UB Bʻ , @ʻ ;Aʻ , =ʻ < 0:ʻ UA<ʻ A,EBʻ ,??<> ;0ʻ < ʻ ;ABʻ , E,2ʻ < ʻ ;ABʻ = E 0 < ʻ ʻ, ;B ʻ =, :8ʻ , =ʻ < ʻ ;0ʻ B2 B ʻ ,;ʻ = Dʻ 2, DBʻ B0ʻ ,2 B,=@ʻ 2 DA;B=ʻ , =ʻ F <E 0 < 0ʻ F BF, B=ʻ H@ʻ ;ABʻ = , ;6

O P S %) # " # . # * A

0;< B0 < <<= AB B U,0 ,?B ; , <= ?> < ; >;A ;A 0 2,0;, D> B ;: , =;AB " B ?A = =0>??BB= 2 E D < ,2< DB ; B ;AB BE,?>,;B= = 0; ?;0 ;A, & B22 D;< A,= ?< 0 =B B= F<00 H2B6 ;AB <;AB A, =: ;AB + ? F,2 U,0 A<FB2B002@ U < D A 0 ?< ;B ; < ;A,;;AB " B ?A U<>2= 0> B 2 ;;2B ?< EB B ?B6 AB@ UB B 0;, EB= <>;< + <;>D,2 H@ & B22 D;< 80 =BE ?B:BEB ;A<>DA ;;<< 2< DB ;<U< <>;;0 B0>2;0 ;A, AB A,=?,2?>2,;B=6 AB B 0 <B,0< ;<0>FF<0B ;A,;<>0,U,0 , @ U,@;B,?AB <>02@ ?2 B=6 AB , = A 0 UA<2B , 2@ 0;<<= < B22 U ;A ;AB # D2 0A ,22 , ?B: , =;AB E ?;< @ < ;AB " B ?A U<>2= B, > ;<;AB 6 $>;A 0 F E,;B , =F>H2 ?>;;B , ?B0 , =;A<0B < A 0 0,;B22 ;B0 A,= ,=BF2< ,H2B B B?;6 ;AB <>;A < ;AB ?< < FB<F2B ;;<< ;AB < < < ,U =B2@ 0F B,= > <> ;A,;& B22 D;< A,= B >0B= ;< DA;,;,22: , = ;B =B= ;< B B H, ;AB $; 0A , @6 A 0 = = <;2B,=;< , @ U 0A ;< 0>H ;;<) ,F<2B< : H>;;< ,=B0FB ,;B =B;B ,;< ;< B0 0;BEB = =B0B ;B=6 & B22 D;< 80 = 0F,;?AB0 , B >22 < ,< <;UA ?A ;<< F2,?B % 0H< < BF;B HB 4;A: UAB ;AB 2 ; ,F <F<0B=;< 0B RB< ;6 C>2 , 80: ;AB ;,=B2: , = ;AB $>D < < ;HB?,>0B ;AB@ UB B < B=;A,;;AB# D2 0A D, 0< 0 UB B ,H<>;;< BE,?>,;B ;AB , =F>;;< 0B, _&AB 1,00B ,A,=,2 B,=@F,00B= < H , <>0,U,0 ,=B <>DA ;< F <F<0B: ,;;AB BDB ?@H<, =: ;A,;;AB +< ;>D>B0B ; <<F0 0A<>2= <; B; B U ;A ;AB % B0: H>;; B , <>;0 =B , = < B H,;;2B ;AB <FB : BEB ;AB $; 0A B >0B= ;< 0;, = H@ ;AB 6 AB B E<>0 ,?; E ;@ < ;AB D<EB B ;A,= HBB 0A<U 0< B ;A BB UBB 0 HB < B H@ ;AB 0>==B , B0;, = =BF< ;,;< < 0< B ;@ FB 0< 0 % 0H< : UA< UB B 0>0FB?;B=: DA;2@ < U < D2@: < C,?<H 0 : , =A,= HBB ,??>0B= < A,E D 0B? B;?< > ?,;< U ;A * 8 2< , , = ;AB <;AB B BD,=B0 1,00B ,80 , @6 AB@ ?2>=B= , BU < ?B 0: , = , D<<= , @ 2,U@B 0: =<?;< 0: B ?A, ;0: , = < < ? ,20: ,0 UB22 ,0 0< B =BFB =, ;0 , =

" < <>0,80 , D> B ;0: 0BB < , < =, %>R: 6 FF6 OO6 A,;,>;A< ;A 0 ;AB + ? F,280 , D> B ;0 UB DA;@: , = 0BB0 < A, ;AB ,?;;A,;AB 0B;;AB < ;A F>H2 ?, = F E,;B6 6 & B22 D;< : 1 () ' #%(E 6 O 6

^ BB & B22 D;< ;< A, 2B0 ;>, ;: BF;6 5: , = ;< %< = % EB F<<2: BF;6 : : 1 () ' #%(E<26 E 6 FF6 O 6

= = L' # ')' % $)' ;2

B2, ; EB0' < ' ;AB' BW 2B06' AB' ?, 0B' , D, 0;' <0;' < ' ;AB ' U, 0'
0<' UB, ' ;A, ;' & B22 D;< ' F <;B0;B=' , D, 0;' ;AB ' H, 0A B ;:'
A<2= D' ;A, ;' ;AB' , 2, ' ?, >0B=' H@' ;AB' , B0;0' U<>2=' , B' ;AB'
FB<F2B' < ' % 0H< ' > B, 0< , H2@' 0>0F ? <>0:' , =' D EB' 0B' ;<'
,' HB2 B ' ' U =B 0F B, =' F2<;06' $>;' =B0F ;B' A 0' 2B;; B ' ;<' ;AB'
BDB ?@' , 22' UB B' 0A FFB=' < ' ;<' ;AB' R< B0 6' < B' UB B'
>2; , ; B2@' , 22<UB=' ;<' D<' ;<' # D2, =:' <;AB 0' ;<' $, R 2:' H>;' ;AB'
\ , N< ;@' UB B' <;' , 22<UB=' ;<' B;> ' ;<' +< ;>D, 2' ; 22' P6
K' 22' ' , 0 ' < ' ;AB' (<EB B ;:8' U <;B' & B22 D;< :' < '
?;<HB ' P;A:' ' ;AB' =0;' < ' ;AB' B; B, ;:' N' 0' ; , M> 22 ;@' ' ;AB'
;<U ' < ' % 0H< :' , =' F <E 0 < 0' < ' ;AB ' <U ' ; <<F0' AB0B'
;U<' 0 F2B' BM> B B ;0' UB B' F B? 0B2@' ;A<0B' UA ?A' AB' = =' <;'
<H;, 6' AB' ?, F ; , 2' < ' +< ;>D, 2' U, 0' BF;' = 0;> HB=' H@'
, H ; , @' , B0;0:' H@' F <?2, , ; < 0' UA ?A' < ;B ' ?< ;, B=' , 20B'
BU0:' , =' 0< B; B0' F2B=DB=' ;AB' BDB ?@' ;<' B, 0> B0' UA ?A' ;AB'
< , =B A B '= 0, FF <EB=:' , =' H@' 0B 0B2B00' B H, D<B0' 2, =
< ' EBA ??B0' , =' ?< <= ; B0:' UA ?A' UB B' BEB ' ;> B=' ;<' >0B' '
;' ;AB' 0, B' ; B' ;AB' +< ;>D>B0B' ; <<F0' UB B' <;' B=:' , =
;AB' ;B ;0' UA ?A' A, =' HBB ' < W2B B=' < U, =' ;<' ;AB' F<0 ; < 0'
HBA =' ;AB' 2 B0' BEB ' 0;, ;B=' < ' ;AB' , D, R B0' < ' % 0H<
& B22 D;< 80' ;B FB :' ; B=' ;<' ;AB' >;; B <0;' H@' ;AB0B'
= 0; , ?; < 0:' UAB ' A 0' =' U, 0' B ; B2@' B D <00B=' H@' 2 ;, @'
F <H2B 0:' D BU' 0A, F' , =' ; , H2B' , ;' ;A 0' ; B6' B' UB ;' 0<' , '
, 0' ;<' U ;B' ;<' ;AB' + ?B' BDB ;' , ;' <' =B' C, B <:' ;<' =B?2, B'
;A, ;' B ;AB ' AB' < ' + ? F, 2' <>0, ' >0;' 2B, EB' ;AB' ?<> ; @6' B'
0>DDB0; B=' ;A, ;' 0< B' F<0;' , 0' , H, 00, ;2< ' < ' 0FB? , 2' B E<@' 0A<>2=
HB' <> =' < ' ;AB' , ' UA<' ; <>H2B=' A ' 0<6' AB' + , ; , ?A:' , 0'
K' , ' B?B00, @' BE 2:8' AB' = =' <;' U 0A' ;<' = 0F2, ?B:' H>;' < 2@' ;<'
0?, B6' 6 ' < ;> , ; B2@:' , ' , FFB, 2' ;<' $, R 2' U, 0' A<FB2B00:' 0 ?B'
;AB' BDB ;' U, 0' B ; B2@' ' ;AB' A, =0' < ' ;AB' + ? F, 28' 0' H <;AB :'
;AB' < =B' =B' % A, B06' 1 >?A' , ? < <>0' ?< B0F< =B ?B:'
=B2, @B=' H@' ;AB' E, 0;' ; B' UA ?A' U, 0' ?< 0> B=' ' DB; ; D' 2B; ; B 0

4 --' * 2 *' 2 # ;' (G>'' * ' 2 0' * ' , - ' 2 .' 8- 5 * 80
1 () ' #%(' / (B (2'' * ' , -' 6 * -0' : 52 0' , -' .-6* 2 * 0 20*' A .(
F G>(
T 1 () ' #%(' / (6(B> (
T 1 () ' #%(' E 6 6 ' & AB ' ;AB@' A, EB' D<;' >2B0' , =' ?, , DB0:' H@'
N>= ? <>0' 0B R> B:' ;AB@' =<' <;' B F2<@' ;AB :' H>;' ;AB' , , 20' , =' FB<F2B'
, B' BF;' 0;, E D' , =' 0A EB D:' UA 2B' UB' 0; 22' U, ;' F <E 0 < 068
K' H =6:' E 6' F6 6

2!"' E &' <>(&'' 77&'' *&)7 '' A

;<' , =' < ' <:' < 2@' 2B=' ' ;AB' B =' ;<' ,' F <F<0,2' < '

% A, BO' ;A,;' A O' H <;AB ' 0A<>2=' 2B,EB' ;AB' BDB ?@:' ' A, 2BO'

;>, ;:' ;AB' $; 0A' H,00,=< :' U,O' ,20<' U ;A= ,U ' < ' ;:'

, =' ' ;AB' &, 1 0;B :' (B B ,2' 1 D>B2' "< N,R:' UA< '

&B22 D;< ' ?< 0 =B B=' ,' B?B00, @' FB 0< ' , =';AB' ,H2BO;' , ' '

+< ;>D,2:' 0A<>2=' ,20<' HB' B <EB=' < ' A O' F<0; 6' <' ;A O'

F <F<0,2' B ;AB ' &B22 D;< ' < ' ;AB' $; 0A' D<EB B ;' U<>2=' ?< 0B ;:' , =' ,O' ;' < 2@' ?, B' ' UAB ' 1,00B ,8O' E,0 < ' A,=' ,2 B,=@' HBB ' < 2B=:' , =' ;AB' " B ?A' A,=' B; B=' ;<' F, :'

;AB' ? 0 O' U,O' <EB 6' AB' + ? F,2' B , B=' ,;' ;AB' <> ? 2'

$<, =:' ;<' ;,2 ' >?A' F ,?; ?,H2B' , =' 0?A BE<>O' 0;> :' H>;' ;<'

=<' 2 ;;2B' F<0 ; EB' A, 6' &AB ' ;AB' E,0 < ' U,O' F,0;' &B22 DY

;< ' ?<>2=' , < =' ;<' = 0 BD, =' A 6

' BB' < , <' =,' %>R:' 6' F6' O 6' "< ';BW;' < ' ;' O'@))% . 6 'E 6' 4 56'

AB' , 0UB ' U,O' < 2@' E ;;B ' < ' "BH6' : :' , =' < 2@' D<;' ;<' &B22 D;< '

' F 2' UAB ' ;AB' ? 0 O' U,O' <EB 6

% & " ' O O N ' % ! $ ')

#' %) # ' "' # ' . # *

= ' A , EB' A ; AB ; <:' UAB ' 0FB , D' < ' & B22 D ; < 8Ø B 0B' 0?AB B' < ' < ; @ D' ; AB' F<0 ; < ' < ' UA ?A' AB' ; B =B=' ; <' H D' A 0' B B @' ; <' , ' 0 ; , =0 ; 22:' B , B=' < ' B ; B D' ; <' ; AB' =B ; , 20' < ' A 0' F2 , 6' ; ' 0' <U' ; B' ; <' =B0? =HB' ; ' ' >22:' , =' ; <' BWF2 , ' ; 0' =B0 D 6

AB' ?A , , ?; B ' < ' ; AB' FB 0>2 , ' < ' UA ?A' % 0H< ' 0 ; , =0' 2B =0' ; 0B2 ' 0> ? B ; 2@' UB22' ; <' =B B ?B6 ; ' , ' 0 ;' 0FB?; < ' ; AB' ?<> ; @ 0 =B' < B 0' , ' , ; AB ' ?A , <; ?' BWF , 0B' < ' <> ; , N' , =' E , 22B@:' UA<0B' DB B , 2' B , ; > B0' , B' A , =' ; <' 0B RB' < ' , @' < B' F< ; 6' ' > ; AB ' BW , , ; < ' ; ' , FFB , 0' ; A , ; ' ; AB' UA<2B' 0M> , B' , 00' < ' 2 , =' HB ; UBB ' ; AB' ; 2 , ; ?' , =' ; AB' , D>0' B0 ; >, @' 0' <; A D' < B' ; A , ' , ' ?< ; >, ; < ' < ' ; AB' =DB' < ' ; AB' B , ' =B' 1 < ; B' C> ; , :' ; AB' , ' <> ; , ?A , ' < ' #0 ; B ' , => , 6' $>; ' < ' ; AB' H , ? H< B' < ' ?B ; , 2' , 00' < ' ; AB' A DAY 2 , =' 0<' , @' 2 , DB' 0F> 0' , B' ; A <U ' <>; ' ; <' B , ?A' 0 =B:' , =' ; AB0B' , B' ; AB 0B2EB0' 0<' A DA' , =' 0 ; BBF:' ; A , ; ' ; AB' UA<2B' FB 0>2 , ' 0BB 0' < B' 2 B' , ' D , D2 < ' < ' <> ; , 0' ; A , ' , ' UB22 , B=' ?A , 6' AB' ; U<' ?A B ' N< ; 0' < ' EBW ; BH , B' ' ; AB' H , ? H< B' , B' ; AB' 1 < ; B' D , I: , ' , H<EB' <H , 2:' , =' ; AB' , HB , ' =B' 1 < ; B ' ?A M>B' 0 W' 2B0' 0<>; A' < ' ; :' , =' ; AB0B' < ' ; AB' ?B ; , 2' F< ; 0' B0FB?; EB2@' < ' ; AB' 0; ' , =' 0B?< =' 2 B0' < ' =B B ?B' UA ?A' UB B' , 22@' 2 , =' <>; 6' $B0 =B0' ; AB' <>; B ' =B B ?B0' ; AB B' U , 0' ' & B22 D ; < 8Ø 0?AB B:' < ' ; AB' EB @' 0 ; , ; :' , ' B ' = D' < ' U< 0:' ?<EB D' < 2@' , ' 0 , 22' , B , ' < ' ; AB' 0B , 0A< B:' , ; ' ; AB' 0<>; AB <0 ; ' F< ; ' < ' ; AB' FB 0>2 , :' ; <' ; AB' UB0 ; ' < ' % 0H< 6' A 0' U , 0' B B2@' ; B =B=' ; <' ?<EB ' , ' B H , , ; < :' ' H@' , @' > < B0BB ' = 0 , 0 ; B ' ; AB' % B0' ; AB 0B2EB0' 0A<>2=' HB' F B ?B=6

; ' B , 0' ; <' 0FB , ' < ' ; AB' 0@0 ; B ' < ' =B B ?B0' ' =B ; , 26' ' ?; <HB ' 5:' & B22 D ; < 8Ø F2 , ' A , =' B H , ?B=' <' < B' ; A , ' < B' ?< ; ><>0' 2 B' < ' U< 0' < ' 2A , = , ' < ' ; AB' , D>0' ; <' ; AB

;A , ;' BB2@' A B=6' >' ;AB' UA<2B:' < 2@' , H<>;' 6 : ' U , 0' F , =' <>;' HB ; UBB ') <EB HB ' 5' , =' BF ; B HB ' V 0<' ; A , ;' ;AB' % B0' < ' < B0' . B= , 0' , @' HB' ?< 0 =B B=' < B' < ' ; AB' ?AB , FB0 ;' EB0 ; B ; 0' ' A 0 ;< @6' AB' 2 ; , B ' , =' FB , 0 , ; @' UB B' U< B=' ' D , D0' < ' 0< B' : ' < ' : ' B :' B , ?A' ' ?A , DB' < ' , ' B D BB ' < ?B :' UA<' A , =' , ' BU' # D2 0A' , =' +< ; >D>B0B' 2 ; , @' , ; ?B 0' , 0' A 0' , 00 0; , ; 0' G < 2@' ' 0>?A' EB B' , E , 2 , H2B:' 0<' 0A< ;' UB B' H<; A' , B0' < ' ; , B=' B 6 K' ' 0< B' = 0 ; ?; 0' , ' 0>H , 2 ; B ' < ?B ' < ' B D BB 0 U ; A' , ' BU' # D2 0A' 0<2= B 80:' > ; ; B 2@' D < , ;' < ' ; AB' 2 , D> , DB:' = B?; B=' , =' ?< ; <22B=' ; AB' 2 , H<> ' < ' : ' FB , 0 , ; @:' , @' < ' ; AB ' ?< FB22B=' ; <' U< ' , ;' , ' = 0 ; , ?B' < ' < ; @' 2B0' < ' ; AB ' A< B0:' UA 2B' ; AB ' 2 , =0' 2 , @' BD2B?; B=6') BEB ; AB2B00:' => D' , ' @B , ' < ' ; A 0' < ?B=' 2 , H<> ' <;' , ' 0 D2B' 0 ; , ?B' < ' Y 0>H< = , ; < ' < ' <;' <??> B=6' AB' D B , ;' M> , ; ; @' < ' U< ' FB Y < B=' 0A<>2=:' ' N>0 ; ?B' ; <' ; AB' +< ; >D>B0B:' HB' , 0? HB=' < B' ; <' ; AB' BD>2 , ' A , H ;' < ' FB 0BEB D' 2 , H<> ' ' ; A<0B' B F2<@B=' ; A , ' ; <' ; AB' B ? B ?@' < ' ; AB' ?< ; <2' BWB ? 0B=' <EB ' ; AB ' 6 6 66' =BB=:' ;' 0' H>;' , ' ; H>; B' < ' N>0 ; ?B' ; <' ; AB' +< ; >D>B0B' < ' #0 ; B , => , ' ; <' 0 ; , ; B' ; A , ; :' => D' , @' < ; A0' < ' ?< 0 ; , ;' FB 0< , 2' ; B ?<> 0B:' H<; A' F E , ; B' , =' F>H2 ?:' ; AB' 2 , H<> D' ?2 , 00B0' BEB ' 0A<UB=' ; AB 0B2EB0' B0FB?; >2:' =>0 ; <>0:' =<? 2B:' , =' <HB= B ;' UA 2B' ; AB' D<EB D' ?2 , 00B0' ' BEB @' F>H2 ?' ; , 0 , ?; < ' BE ?B=' >?A' ; B22 DB ?B:' F , ; <; 0 :' D<<=' 0B 0B:' , =' F <H ; @6' B? B?@' E ; A' B0FB?;' ;<' ; AB' BW ; B ;' , =' , ;> B' < ' ; AB' E< 0' E , 0' B N< B=:' , =' ;' 0' A DA2@' ? B= ; , H2B' ; <' , 22' ?< ?B B=' ; A , ;' A , =2@' , ' E , D>B' F , , D , FA' ?< ?B D' ; AB' % B0' <> =' ; 0' E , @' ; <' ; AB' F>H2 ?' F ; 06' AB' " B ?A' E , =B 0' B , B=' D < , ;' < ' ; AB' , ; > B' < ' ; AB' H , B ' 0 D' , D , 0 ;' ; AB :' ; 22' ; AB@' <> =' <> ' , @' , , @B=' < ' ;' 0<' , 0' ; <' 0 ; <F' ; AB ' > ; AB ' , =E , ?B

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8' C< B0:' F6 456 ' '

O O#%)# "# . # * A

0 2, > =, ; < 0< , 0 ,22B 0?,2B A,= HBB ?,>0B= , ; ;AB <;AB B = < ;AB % B0: H@ =, D >F ;AB 2A, = , , = CEB ?, 0; B, 0: B,?A < UA ?A 0F B,= <>; , , 0A , 2B H <,=: B,?A D ;< ;AB <<; < ;AB AB DA;0 ,H<EB ;AB ,D>0: , = ?<>2= < 2@ HB F,00B= < ;AB , <U F,EB= A DA <,= < , ; , B ;<% 0H< 6

<;AB F2,?B0 , EB @ = B B ; B;A<= < , D ;AB % B0 > ,FF <,?A,H2B A,= HBB ,=<F;B=6 & AB B ;AB AB DA;0 UB B EB @0;BBF: H>; <; ,H0<2>;B2@ ,??B00 H2B V , =, DB <>0 ;A D ;< ;AB=B B ?B: < AB B K=B,= D <> =:8 > 0B, ?A,H2B H@ ;AB ?, < : < ;AB B=<>H;0 ,H<EB: >0; ,2 <0; B?B00, 2@ <??> : V ;AB 02<FB A,= HBB ?>; < H2,0;B= ,U,@ H, =0: 0< ,0 ;< , B ,H0<2>;B F B? F ?B0 < , 0 ,22 0?,2B6 ; < B F< ; ,H<EB 2A, = , ;A 0 U,0 =< B < , < ; < >22 : @, =06 #EB ;A 0 U,0 <; ;AB 2,0; F B?,>; < ; , B 7 , ; 0BEB ,2 F2,?B0 ,E B0 , =BBF ;< ;AB2 B: , =>F ;AB ?<2> 0: < B < 2B00 > =B ?<EB : DA; F<00 H2@ A,EB FB B; , ;B=6 >?A ,E B0: ;AB B < B: UB B 0;> B=: , ; ?A<0B F< ;0: H@ , H <,= ,H, ; ; 0 < B ; , D2B B ; , 2@ ?< F<0B= < <2 EB ; BB0 U ;A ,22 ;AB ?A B H<>DA0 B , D: = ,DDB= ;<DB;AB , = ;B 2,?B= < , =BF;A < , @ @, =06 >?A , 0; >?;> B ?<>2= <; HB? ,U2B= ;A <>DA: < ?<>2= ; HB ABU =<U U ;A<>; , ;B U,0;B < ; B , =2,H<> 7 < : < ;AB <;AB A, =: = = ; , < = , @?<EB : 0 ?B D ,FB < >0 B; @ ?<>2= F2,@ FB B?;2@ UB22 ;A <>DA ;6 AB ?A B < ;AB0B ; ,FO U,0 ;A, ; 2, = ,? <00 ;AB2< D ,E B ,H<EB ;AB E 22,DB < >=, : =<U ;AB H<;; < < UA ?A 2<U0 < B < ;AB U ;B ; ;< B ;0 UA ?A ,22 B,0;U, = ;< ;AB ,D>06

; U,0 < ;> , ;B ;A, ; +< ;>D,2 U,0 , UB22 U<<=B= ?<> ; @ 6 ;AB B , B BD < 0 UAB B ; U<>2= HB F<00 H2B ;< F <?> B ;AB B 0B , <> ; < ; HB ;A, ; E,0 2,E 0AB= < ;AB ,??B00< B0 < ;AB B=<>H;06 22: ,0 A,0 HBB ,2 B,=@ B ; < B=: UB B F,2 0,=B=7 , @ A,= ,== ; < ,H, ; ; 0 < B ; , D2B B ;0 ;A <U >F < ; < ;AB : 0< B U,@ =< E ;AB A 220 =B: 0< ,0 ;< =B; , ;AB , =E, ? D B B @ > =B B ,0 2< D ,0 F<00 H2B6

AB U< 0 UB B = E =B= ;< B DA; 0B?; < 0: ;AB 0; 2 B

C< B0: < %(F6 4 6 K BW;B ; < >FU, =0 < : @, =0 < ;AB 2B ; A,0 HBB 0< ?>; , = H2,0;B= ,2< D ;0 0> ; ,0 ; < D EB , ?< ; ><>0 0?, F: BEB @UAB B BW?BB= D BB; AB DA;: , = ?<EB B= < ;0 UA<2B 2B D;A H@ H<;A >0 B; @ , = ?, < 68

?< F<0B= < <> :; ;AB 0B?< = 2 B < ;A BB: UA 2B ;AB B DA;A ?< 0 0;B= < ;AB B ; B; B ?A B ; < F> F<0B0 < B H, , ; < :, ;; ;AB BW; B B 0<>;AB F< ; < ;AB FB 0>2,6 ;AB <>;B < 60B?< =, @ 2 B ;AB ;A BB 0B?; < 0 UB BG

I J < ; < EB 2B0 < ;AB , D>0 , ; 2A, = 8, , 2< D ;AB ? B0; < , 0;BBF H>; <; EB @ 2< ;@ =DB: ,0 , , 0 ;AB D B, ; ,E B ;A, ; <EB 2<< 0 ;AB E 22, DB < >=,6 A 0 < ; U,0 B2, H< , ;B2@ < ; B=: ,0 ; H2<? 0 ;AB D B, ; <, =: ;AB 2, ; H@ ;AB U, ;B 0 =B: UA ?A < 0 ;AB B, 0 B0; , FF <, ?A ; <% 0H< < ;AB < ;A6 ;AB EB 2B0 ;AB B 1B B >2; , ;B2[?< 0; >?;B= < 2B00 ;A, B=<>H;0 U ;A 5P D> 06 U< ;A<>0, = @, =0 < A 220 =B < B F2, ?B A, = HBB 0?, FB= ; < , F B? F ?B7 , 2B H@ ;AB 0 =B < ;AB , D>0 A, = HBB > =, ;B=6 AB < B ?< Y 0 =B , H2B D, F ;AB 2 B: ;AB , E B , ; ;AB AB, = < ;AB E, 22B@ < , 2, = W: A, = HBB ?A< B= H@ < B < ;AB D B, ; = '' (, H<EB =B0? HB=6 AB 8B=<>H;0 BM> B= , D, 0< < P: B 6

I J AB 0B?< = 0B?; < : < ;AB , E B, H<EB >=, ; <; AB 2B ; < ;AB 0; BBF 1 < ;B D , , : < B= 0< BUA, ; < , 0, 2 B ; , D2B G ; A, = , < ; , 22 < 0< B <> , = , A, 2 2B0: UA ?A ??>=B= ;AB <0; 2< ;@ , = =B B 0 H2B F, ; < ;AB H, ? H< B , DB < ;AB % 0H< FB 0>2,6 B < ;AB <> D B, ; F, EB= <, =0 B ;B D ;AB ?, F ; , 2 < ;AB < ;A: A<UBEB : F, 00B0 <EB ;AB 0A<>2=B < ;AB0B AB DA;0: , = ;AB@ UB B ;AB B < B EB @ AB, E 2@ < ; B= < ;AB 0; : ;AB 2, DB B=<>H; < : P B < ;AB ; <F < 1 < ;B D , ?, HB D < B < ;AB < D , 2 <>;B U< 0 < =B B= < ?< 0; >?; < & B22 D; < 8 B, 2 B0; <; B0 < ?; <HB 56 AB B UB B , 22 0BEB B=<>H;0 <> ; D D> 0 , = BM> D , D, 0< < : B < ;A 0 8, ?; < < ;AB 2 BO6

I J ` > ;B= B B ; ?A, , ?;B U, 0 ;AB < ; < B DA; 2B0 < ;AB 2B ; < 1 < ;B D , , ; <; AB F, 00 < > , : <EB 2<< D ;AB >FFB E, 22B@ < ;AB 3 R, = B , = ;AB E 22, DB < <H , 26 AB < ; ?, ; < < ;A 0 2 B A, = <; B ;B B= ; <& B22 D; < 8 < D , 2 F2, : , = ;AB B UB B < 2@ ; U< B=<>H;0 >F< ; ; UAB 1, 00 , , FFB, B= HB < B ; ?; <HB 6 >?A =B B ?B , 0 ;AB B U, 0 ?< 0 0;B= ;AB , ?; ;A, ; ;AB =< , ; D 2< ;B D , , B=<>H;0 <EB 2<< B= ; < ;AB DA; , = ;A, ; ;AB ; U< 0 , 22 U< 0 N>0; B ; < B= ?< , =B= ;AB , A DA <, = < <H , 2 ; < , HB , = ? 1 < ;??A M>B: UA ?A D<B0 ;A <> DA ; 0 ?B ; B6

O P #' %) # ' " ' # ' . # * A

$ >;' ;AB B' U,0' ,' ??B, ' F<00 H 2 ;@' ;A , ;' ;AB' B B @' DA;' , B' ,' F>0A' >F' ;AB' E, 22B@' , =' ;AB' A DA <, =:' A@' ;AB' E 22, DB' < ' 3 H B ,:' , =' ;A 0' U,0' =BB=' ;AB' <0;' F <H, H2B' F< ;' < ', ; ; , ? ' ' ;AB' UA<2B' 5' 2B0' < ' < ;' < ' ;AB' B B @' ;<' 0B2B?;6' & AB :' , ;' ;AB' 2, 0;' < B ;:' ;AB' $; 0A' < , =B A B '=B;B B=' ;<' A<2=' ;AB' <>;B ' 2 B0:' , =' <;' B B2@' ;<' ,22' H, ? ' , ;B ' A, E D' >0B=' ;AB ' < ', ';B F< , @' =B B ?B:' AB' A, =' ;<' ? , ' ;A 0' F< ;' U ;A' ; <<F0:' , =' ;<' ?< 0; >?;' BU' U< 0' >F< ' ;' ,0' M> ? 2@' ,0' F<00 H2B6' " <> ' = E 0 < 0:' ;AB B < B:' < B' ;A, ' : ' B :' UB B' ?< ?B ; , ;B=' AB B6' & B22 D;< 80' <U ' AB, =' M>, ;B 0' EB B' B0; , H2 0AB=' , ;' ;AB' A, 2B;' < ' +B <') BD <:' < ' ;AB' 02<FB' , H<EB' ;AB' A DA <, =:' , =' , ' EB @' 2, DB' B=<>H;' E,0' ;A < E ' >F' < ' ;AB' +< ;B22<' A 22:' , H<EB' 3 H B , :' E ;A' 0BEB ,2' 0 ,22B ' < B0' > ;AB ' ;<' ;AB' DA;:' ;<' ?< B?;' ;' E ;A' ;AB' 1 < ;B' D , ,' E< 06' <H ,2:' ;AB' E 22, DB' , ;' ;AB' <<;' < ' ;AB' AB DA;0:' E,0' AB2=' ,0' , ' <>;F<0;:' H>;' , H, =< B=' EAB ' 1 ,00B ,' F>0AB=' < E, =' ;<' ;AB' < ;:' ,0' ;' E,0' ;<<' , ' ,=E, ?B=' ;<' ;AB' < ;A' ;<' HB' ; B, ;B=' ,0' , ' ;BD ,2' F, ;' < ' ;AB' F<0 ; < 6' $ >;' ;AB' " B ?A:' EAB ' ;AB@' A, =' ?, B=' <H ,2' E ;A' = ?>2;@:' 2<< B=' , ;' ;AB' , ' 2 B' HBA =' ;:' , =' B >0B=' ;<' , ;;B F;' , @' > ;AB ' ,=E, ?B6' AB' A 22Y 0 =B' U,0' ,0' < =, H2B' ,0' ;AB' $>00 , ?<' AB DA;0' < ' EA ?A' ;AB@' A, =' < 2@' B?B ;2@' HBB ' BF>20B=' 6 ;' E,0' >22' < ' ; <<F0' , =' D < E D' ' 0; B D;A' BEB @' < B ;' ,0' ;AB' B, ;A E< 0' ?< ; >B=' ;<' , 0B6' IOJ' AB' <> ;A' 0B?; < ' < ' ;AB' <>;B ' < ' < ;AB ' < ;' E,0' ;A, ;' < ' ;AB' D< DB' < ' ;AB' 3 R, = B' I< ' ;AB' F, 00' < ' > ,:' ,0' ;' 0' 0< B; B0' ?, 22B=J' ;<' ;AB' 0B, 6' ;' E,0' , H<>;' ; E??EB' 2B0' 2< D:' H>;' < ' ;A 0' 0F, ?B' 0 W' 2B0' , =' < B' E,0' ?<EB B=' H@' ;AB' Y F, 00, H2B' H<D' < B=' H@' ;AB' <H0; >?;B=' 3 R, = B:' , =' , <;AB ' 2B' &, 0' < B=' H@6' ;AB' < =, H2B' B ; B ?AB=' ?, F' < ' , ' . ?B ;B:' , H<EB' ;AB' ;< E ' < ' < B0' . B= , 0:' ;AB' <0;' ?< F2B;B' , =' 0B2 0> ? D' < ', 22' ;AB' E< 0' ' ;AB' FB 0>2, 6' A 0' 0; < DY A<2=' 2, @' <>;0 =B' ;AB' , ' 2 B:' HB@< =' ;AB' EB :' ?<EB D' ;AB' H =DB' , =' ;AB' F, EB=' # :((#' < ' %B ,' ;<' % 0H< :' ;AB' < 2@' ?, , DB <, =' < ' ;AB' EB0;B ' 0 =B' < ' ;AB' % B0' ;' U,0' < B' <

T $@' , ' ,0;< 0A D' H2> =B ' ;AB' ?, F' < ' < B0' . B= ,0' 0' F2, ?B=' H@') , F B ' ' H 0' , F' I, =' , FF, B ;2@' ' H 0' ;BW;' , 20<J' (:'# < ' ;AB' EB ' 3 R, = B:' < ' ;AB' , ' 2 B' < ' AB DA;0:' UA 2B' ' B, 2 ;@' ;' E,0' ,' D B, ;' '%'% . :) " ?<EB D' ;AB' < 2@' F, 00, DB' < ' < ;A' ;<' 0<>;A' <EB ' ;AB' 0; B, ' , =' ;0' H<DO6

O ' #' % W) # ' "' # ' . # * ' A

;2, ; ?:' UB' =' ;A BB' 0B?; < 0' < ' =B B ?B:' UA ?A:' > 2 B' ;A<0B' < ';AB' <>;B ' 2 B:' UB B' ,22' ?< F2B;B=' H@' BF;B HB ' :' , =' A,=' <' ?B ; ,2' D,F6' I J' AB B' U,0' <EB ' ,' 2B' < ' F,00,H2B' > =,; < ' ,;' ;AB' B,0;B ' B =:' HB;UBB ' ` ;B22,' , =' 2EB ?,6' H<EB' ;AB' 0; , B=' E 22,DB' U,0' , ' 0<2,;B=' A 22:' UA ?A' U,0' ,22' < ; B00:' < ' <' 2B00' ;A, ' 0 W' B=<>H;0' A,=' HBB ' F2,?B=' >F< ' ;:' ;<' B 2,=B' ;AB' A DA <,=' ,? <00' ;AB' > =,;B=' 2<UB ' D <> =6' AB ' ?, B' ;AB' B ,' =B' B EB0:' ;A BB' 2B0' < '2< ;@' , =' = ?>2;' A 220:' UA ?A' A,=' HBB ' 0?, FB=' ;<' ,2 <0;' FB B?;' ,??B00 H 2 ;@6' ' ,' 0>==B ' = F' UB0;' < ';A 0' , DB' U,0' ;AB' F,00' < ' $>?B22,0:' ;A <>DA' UA ?A' > 0' < B' < ';AB' ;A BB' D B,;' A DA <,=0' ;A,;' B ;B ' % 0H< 6' ;' U,0' B,0 2@' =B B 0 H2B:' ,0' ;' 2 B0' HB;UBB ' ;U<' A DA' , =' 0;BBF' <> ;, 0 =B0:' , =' 0' < 2@' ,' ?<>F2B' < ' A> = B=' @, =0' H <,=6' B=<>H;0' UB B' F2,?B=' 0<' ,0' ;<' , B' ;' < ' B =' ;<' B =:' , =' ;<' 2, ' ;' < ' H<;A' 0 =B06' 2 B' # :((% ;0B2 ' E,0' H2<? B=' U ;A' 0>??B00 EB' ,H,;; 0:' , =' ;AB' E ,=>?;' 2B,= D' >F' ;<' ;' E,0' B=6

I J' AB' 0B?< =' 0B?; < ' < ' ;AB' B ' 2 B' BW;B =B=' < ' ;AB' F,00' < ' $>?B22,0' ;<' ;AB' + , ' < ' 1 , ,:' ,' < ;' < ' <EB ' 0 W' 2B06' AB' B,0;B ' F, ;' < ';A 0' U,0' < B=' H@' ;AB' ;< B D' AB DA;0' < ' ;AB' ,HB ,' =B' 1 < ;B?A M>B:' ;AB' <0;' =< ,; D' <> ;, ' 0> ;' ';AB' EA<2B' FB 0>2,:' ,2 <60;' 0;BBF' B <>DA' ;<' =B B =' ;0B2 ' E;A<>;' < ; ?,; < '7' H>;' ;A BB' B=<>H;0' BEB ;AB2B00' A,=' HBB ' B, B=' >F< ' ;0' 0> ;6' $>;' < ';AB' F,00' < ' 1 < ;B?A M>B:' ,;' ;AB' 2B ;' 0 =B' < ';AB' 0> ;:' =< E ' ;<' . , ,' ;AB' D <> =' E,0' 2B00' EB22' , B=:' , =' AB B' ;AB' # (% < ' <H ,2' , =' 3 H B ,' ? <00B=' ;AB' , DB6' 1 >?A' < 8; ?,; < :' ;AB B < B:' U,0' 2,E 0AB=' < ';AB0B' <> ' 2B0:' ,2< D' EA ?A' ;AB B' EB B' B' 0; < D' B=<>H;0:' ?< B?;B=' E ;A' B,?A' <;AB ' ';AB' B, 'H@' ,' 2 ;, @' <,=' F,00 D' ,2< D' ;AB' 0<>;AB ' ? B0;' < ';AB' AB DA;06' AB B' U,0' ,' 0B?< =' , =' < =,H2B' =DB' HBA =' ;A 0' 2 B:' EAB B' > ;AB ' =B B ?B' ?< 2=' HB' < B B=' ';AB' > 2 B2@' BEB ;' < ';AB' B B @' < ? D' A 0' E,@ >F' ;AB' A DA <,=6

I J' " < ' 1 , ,' ;<' ;AB' 0B,:' B, 2@' ;B ' 2B0:' ;AB B' E,0' < ';AB' <0;' F, ;' ,' UB22 , B=' 2 B' < ' AB DA;0' F <;B?;B=' ' < ;' H@' ;AB' ,E B' < ';AB' EB ' < ' ,<' %<> B <:' ,' =BBF:' >DDB=:' , =' ' , @' ?,0B0' ,??B00 H2B' ?2B ;:' < 2@' ? <00B=' H@' ,' 0 D2B' <,=:' ;A,;' < ' < B0' . B= ,0' ;<' 1 , ,6') BEB ;AB2B00:' 0 W' B=<>H;0' UB B' B, B=:' ;<' ?<EB ';A 0:' , =' ;AB' ? E' <;AB ' F< ;0' UAB B' ;AB' ,E B

S #' ( )' "' #' %) # O

BEB' HBB' HB < B:' ;AB' D <00' ;<; , 2' < ' ; <<F0' ' ;AB' % B0' , <> ; D' ;<' O : ' B :' < ' UA< ' , H<>;' 4: ' UB B' 0 ? ' < ' =B; , ?AB=:' , =' : ' UB B' F B0B ;' > =B ' , 06' A 0' D> B' =<B0' <;' ??>=B' ;AB' ;U<' H , ; ; , 2 < 0' < ' , B0' UA<' D>, =B=' ;6' C>2 , 80' , =' ;AB' 2 B0' , <> =' ;' , ;' ;AB' <>;A' < ' ;AB' , D>06

' +< ;>D>B0B' BD>2, 0:' & B22 D;< ' A , =' <U' > =B ' A 0' A, =' ;AB' O: ' B ' UA<' A , =' <>DA;' , ;' $>00, ?<:' F2>0' ;AB' :O ' ?, E, 2 @' > =B ' " , B' , =' ;AB' H D, =B' > =B ' $, = < =' I <U' ?< 0 0; D' < ' EB' H , ; ; , 2 < 0J ' UA ?A' A , =' HBB ' D>, = D' ;AB' F<0 ; < ' HBA =' ;AB' 2E, ' < ' ;AB' =, @' < ' ;AB' H , ; ; 2B:' ;<DB;AB ' U ;A' ;AB' B0B EB' , ; 22B @' < ' % 0H< 6' AB' ;<; , 2' , =B' 4: ' B :' < ' UA< ' O: ' UB B' U ;A' ;AB' ?<2<> 0' , =' : ' 0 ? ' ' A<0F ; , 26

' 2 ; ,' ;AB B' UB B' ;A BB' H D, =B0' , =' <> ' 0<2, ;B=' > ;0' < B' U ;A ' ;AB' % B0 V ;AB' <>;AB ' $B ,' H D, =B' < ' %B?< :' ;A BB' BD B ;0' :' ;AB') < ;AB ' #0; B ,=> , ' H D, =B' < ' 1 , =, :' , 20<' ;A BB' BD B ;0' , =' ;AB' % 0H< ' 2<?, 2' H D, =B' < ' EB' BD B ;0' U ;A' ;U<' 0; , @' > ;0' < ' ;AB' < ;A' ' , =' ;U<' < ' ;AB' 0<>;A^6' AB' > HB 0' < ' , 22' ;AB' BD B ;0' , ' EB @' 2<U:' <U D' ;<' ;AB' U , @' ' UA ?A' ;AB@' A , =' HBB ' BD2B?;B=' , =' > =B B=' H@' ;AB ' D<EB B ;:' 0 ?B' ;AB@' UB B' ? , 22B=' <>;' B' < ;A0' HB < B7' , @' A , =' = B=:' , =' , ' < B' A , =' =B0B ;B=6' AB' ;A ;BB ' ?< F0' = =' <;' HB;UBB ' ;AB ' 0>FF2@' < B' ;A , : ' B ' F B0B ;' > =B ' , 0:' U ;A' : ' 0 ? ' ' A<0F ; , 26' ' , == ; < ' ;AB B' UB B' : ' , ; 22B @ B ' F <E 0B=' < ' ;AB' , 0' < ';AB' , ; @' 2 ; ,' < ';AB' =? , I:8 , :' , D' , 2 ;<DB;AB ' :O ' ; <<F0' < ';AB' K' 0B?< =' 2 B68

0' ;<' ;AB' =B , ,' UA<' A , =' ; , B ' B >DB' ' , =' , H<>;' % 0H< ' U ;A' ;AB ' , 2 B0:' UAB ' ;AB' UA<2B' F<F>2, ; < ' < ' 0<>;A

' 2 B' ;2' , =' ;A' 2 B' BD B ;0' , =' ;AB' 6 ;A' , ?, =< B0:' <;' >?A' <EB ' :P ' H , @< B;0' ' , 226

' =, =, :' , 0;B22<' $, ?<:' <E 2A, <6

8 < , :' %B , :' , ; , B 7' ;AB' <> ;A' H , ; ; , 2 < ' I < =B22, J' U, 0' ' D, 0< ' , ;' +B ?AB:' , 0' U, 0' , 20<' , ' ?< 0 =B , H2B' H<=@' < ' =B JP;' ; <<F0' < ' ;AB' 2 B:' A, 2 ; , B=' B? > ;0:' 7

* :' :' :' , =' 0' < ' % 0H< :' , =' < B0' . B= , 06

^ "B ,' , =' . RB>:' F <FB 2@' HB2< D D' ;<' , ;80' ?< F0:' H>;' 0< B2 <U' 0BF, , ;B=' < ' ;6

' B;>H, 2' , =' 2?, ?B ' =<' >26

UB0;B ' $B ,' , =' < ;AB ' #0; B => ,' B; B=' U ;A ' ;2 B' % B0:' ;' 0' F<00 H2B' ;<' <H; , ' , @' D> B0:' 0,EB' ;A,;' ;AB@' 0>FF2 B=' ;AB' H>2 ' < ' ;AB' : ' E<2> ;BB ' , ; 22B @ B ' N>0;' B ; < B=' ,H<EB:' , =' ;A,;' ;AB' F ? B=' B ' < ';AB' =B , ,' < ' ;AB' ?,F ; ,2' ;0B2 ' A,=' HBB ' < D, RB=' ;<' ;U<' H,;;,2 < 0' < ' K ; ,=< B0') ,? < ,2B0@' < ' ,H<>;'O ' B ' B,?A6' AB' UA<2B' ,@' A,EB' , <> ;B=' ;<' , @' > HB ' < ' : ' >F' ;<' O : ' B :' < ' UA< ' ,H<>;' ;U< ;A =0' UB B' , B=' U ;A' >0 B;0:' ;AB' B0;:' ;A<0B' < ' ;2 B' B <;B ' = 0; ?;0:' A,E D' 0; 22' <;A D' HB;;B ' ;A, ' F B06' 0' <0;' < ' ;AB ' UB B' 0?,;;B B=' U ;A' ;AB ' , 2 B0' ' ;AB' E 22,DB0' UAB B' ;AB@' A,=' ;, B ' B >DB:' < ' ;AB:' ?, F0' < ' A>;0' UA ?A' ;AB@' A,=' < B=' ' 0AB2;B B=' 0 ;>,;< 0:' ;AB@' ?<>2=' A, =2@' HB' ?< 0 =B B=' ;<' HB' ' ,' 0;,;B' < ' <H 2 R,;< :' , =' ?B ;, 2@' UB B' < ' <' >0B' B ;AB ' < ' D, 0< D' < ;0' < ' < ' B F2<@ B ;' ' ;AB' 2 B' < ' H,;;2B6

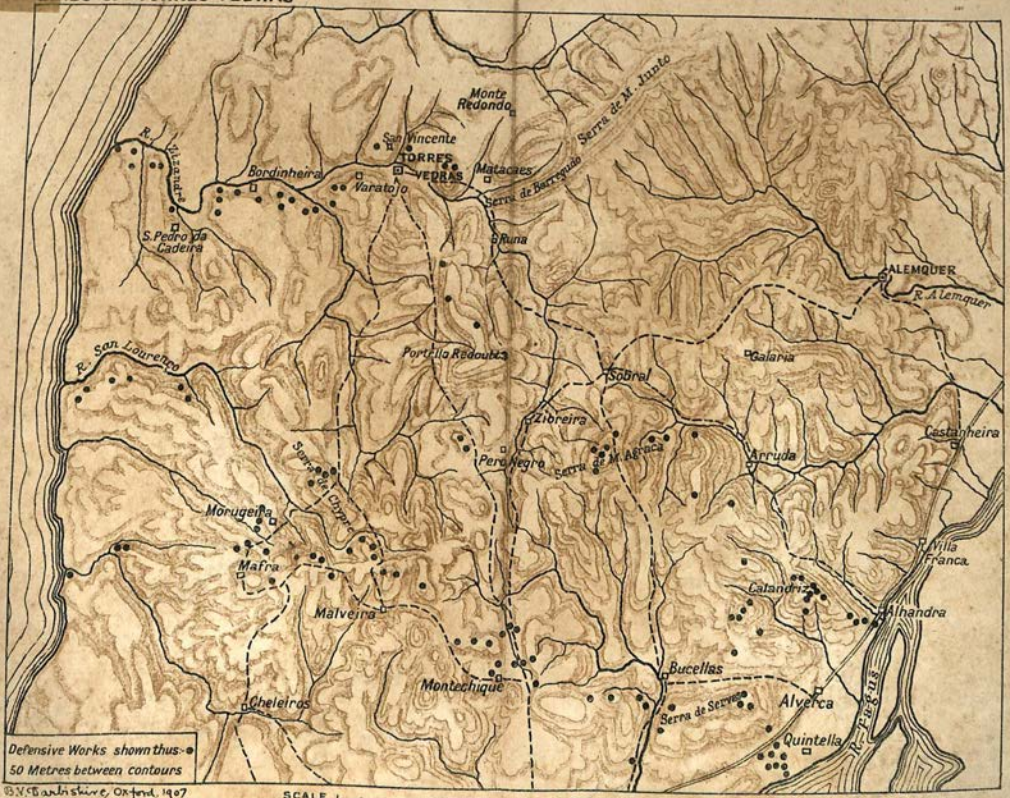
%,0;2@:' ' ?,2?>2,; D' ;AB' < ?B0' UA ?A' & B22 D;< ' ,??> >2,;B=' U ;A ' ;AB' % B0:' UB' >0;' B ; < ' ;AB' ;U<' F, 0A' = E 0 < 0' < ' ;AB' @' < ' #0; B ,=> ,6' B, D' ;A,;' ,22' U,0' M> B;' < ' ;AB' < B ;' < ' ;AB' < ; B ' < ' =,2>0 ,:' ;AB' $; 0A' < , =B ' A,=' ,0 B=' ;AB' 1 , M> 0' < '%,' < , ,:' UAB;AB :' ' ,??< =, ?B' U ;A' ,' F < 0B' ,=B' 0<' 2< D' ,D<' ,0' C>2@:' AB' ?<>2=' 0F, B' , @' ; <<F0' ;<' ,00 0;' ' ;AB' A<2= D' H,? ' < ' ;AB' , '" B ?A' , @' < ' E,0 < 6' AB' 1 , M> 0:' U ;A' ,' 2 HB ,2 ;@' < ' UA ?A' ;AB' ,= R' BDB ?@' U<>2=' A,EB' = 0,FF <EB=:' ' ;0' 2B,EB' A,=' HBB ' ,0 B=:' BF2 B=' ;A,;' AB' U<>2=' H D' >F' A 0' ;U<' B0B EB' = E 0 < 06' %B,E D' $,22,0;B <0' < ' ;AB' =,2>0 , ' H< =B :' , =' , <;AB ' = E 0 < ' > =B ' ,0' ,;' $,=,N<R:' ' ,== ; < ' ;<' ;AB' D, 0< ' , =' 1 ,==B 80' +< ;>D>B0B' ?,E,2 @:' AB' , ?AB=' < ' 2=B,' (,22BD,', =' % 0H< ' U ;A' ;AB' ; <<F0' < ' %,' , B ,' ' , =' A, 2B0' 8 * < B22' ,H<>;' : ' B 6' ' ?;<HB ' ;A' AB' A,=' , EB=' ,;' ;AB' ?, Y ;< B ;0' HBA ='61 , ,:' < ' ;AB' 0B?< =' 2 B' < ' =B B ?B:' UA ?A' A 0' ,22@' A,=' BM>B0;B=' A ' ;<' <??>F@6' & B22 D;< ' =B B =B=' ;AB' H D D' >F' < ' ;AB0B' ; <<F0' H@' ;AB' F2B,' K';A,;' AB' = =' <;' ;A ' A 0B2 'N>0; B=' ' <;' H D D' ;<' A 0' F<0 ; < 0' ,22' ;AB' < ?B' UA ?A' U,0',;' A 0' = 0F<0,2' 8' ' $>;' ;' 0' =<>H; >2' UAB;AB ';AB

' & 2 <' A,=' <U' B0 D B=' ;AB' ?< ,=' < ';AB' ?,E,2 @:', =' D< B' H,? ' ;<' A 0' <2=' , ; @' = E 0 < 6

' AB' . , D>, =8 , =' =' * E 0 < ' < 'A 0', @6

^ 1 () ' #%(' E6 F6 6 006

LINES OF TORRES VEDRAS



W. & A. K. Johnston, Oxford, 1907

" B ?A' , @' UB B' ;A >0;' ;A <>DA' ;AB' =B B ?B0' , ;' 6]< ' UB, ' 0B?; < 6' AB' DB B ,20' < ' ;AB' 0BEB ;BB ;A' , =' # DA;BB ;A' ?B ;> B0:' UA<' 0<' < ;B ' H> 2;'2 B0:', =' UB B' 0<' B,0 2@' BE ?;B=' < ' ;AB :' 0> B B=' = 0,0;B ' HB?,>0B' ;AB@' = BU' <>;' ;AB ', B0' '< B' ,;;B >,;B=' ;A B,=:', =' UB B' ;AB B < B' UB, ', ;' BEB @' F< ;:', =' ,2U,@0' B < ' ;<' ;AB' ,00, 2, ;', ;' ;AB' F2,?B' UAB B' AB' ,=B' A 0' ,00,>2;6' & B22 D;< 80', @' U,0' IU ;A' ;AB' BW?BF; < ' < ';AB' =' * E 0 < ', ;' < B0' . B= ,0J' D,;AB B=' ' ;U<' 0<2 =' ,00B0:' < B' ,? D' <H ,2:' < ' ;AB' AB DA;0' HB;UBB ' 1 < ;B' D , ,', =' > ,:' ;AB' 0B?< =' , =' 0 ,22B ' HBA =' 2A, = ,6' AB' < B' ?<>2=' B,?A' ;AB' <;AB ' ' A,2 ' ,' =,@80' , ?A:' < ' ;AB' <,=0' HBA =' , =' F, ,22B2' ;<' ;AB' 2 B0' A,=' HBB ' F>;' ' D<<=' BF, 6

AB' UA<2B' < ';A 0' E,0;' 0@0;B ' < ' B=<>H;0' U,0' ;<' HB' AB2=' H@' ;AB' ; <<F0' < ';AB' 0B?< =' 2 B:', =' H@' ;AB ' < 2@6' AB B' UB B' ,2;<DB;AB ' 0< B' : ' B ' < ';AB' 0B?< =' 2 B' ' ;AB' < ; ?,Y ; < 0:' ?< F<0B=' < ' I J' ;AB' : ' I, ;B U, =0' , 0B=' ;<' : J' 2 ; ,' , ; @6' I J' ',H<>;' '+< ;>D>B0B' BD>2, ', ; 22B @:' , =B=' H@' <EB ' : ' D> B 0' F ? B=' < ' ;AB' 2 ; ,' , =' =B , ,:' ; , B=' H@' ;AB' BD>2, 0' , =' ?< F< , ;B=' U ;A' ;AB 6' I J' ' 0< B' '$; 0A' , ; 22B @ B ' < ';AB' H, ;;B B0' UA ?A' A,=' HBB ' 2@ D' ' B0B EB' , ;' % 0H< 6' IOJ' ' F ? B=' ?< F, B0' < ' ;AB' % 0H< ' =B , @,' I, ; ,=< B0J' = 22B=' ;<' ,' 0; , ;B' < ' = 0? F2 B' <;' >?A' U< 0B' ;A, ' ;A , ;' < ' ;AB' 2 ; ,6' I J' ';AB' 2, = D' < ?B' < ' : ' $; 0A' , B0:' F, ;2@' < ' ;AB' 2BB;:' F, ;2@' H <>DA;' 0FB? ,22@' < ' # D2, =' ;<' D, 0< ' ;AB' F <F<0B=' 2 B0' < ' B H, , ; < ' , ;' ;6' C>2 , 806' IPJ' ' ;AB' =BF<;0:' ?< Y E,2B0?B ;0', =' B? > ;0' < ' ;AB' B DA;' % B' BD B ;0' < ' , ; @' , 0B=' < ' % 0H< ' , =' <>;AB ' #0; B ,=> , V ,H<>;' O: ' 0; < D6

' ,226:' ;AB B < ?N' ;AB B' UB B' ,H<>;' : ' B :' <0;2@' ; <<F0' < ' 0B?< =, @' M>,2 ;@:' < ' : ' ' ;AB' F, 0A' ,>W 2 , B0' , B' ?<> ;B=:' B,=@' ;<' , ' ;AB' % B0:' U ;A<>;' ,' , ' HB D' U ;A= ,U ' < ' ;AB' , 0' < ' ;AB' B2=' , @6' AB' <>;B ' 2 B0' UB B' ?,2?>2,;B=' ;<' BM> B' ,H<>;' : ' B ' < ' ;AB' B=<>H;0:' ;AB' B ' < B0' O: :' H>;' ?2B, 2@' H<;A' = =' <;' BM> B' ;<' HB' , B=' ,;' < ?B6' ';AB' <>;B ' 2 B' UB B' H < B :' ;AB' D, 0< ; <<F0' < ' ;AB' ;,?;' F, ;0' < ' ;' ?<>2=' ,22' H,? ' < ' ;AB' 0B?< =6' 1 B, UA 2B' ;AB' B2=' , @' U<>2=' HB' B D,D D' , @' " B ?A' ?<2> 0' ;A,;' DA;' A,EB' H < B ' ;A <>DA:

% & " ' O O N ' % ! $ ')

1 9) ' $ # " #' #' %) # ' "' # ' . # *

\8 ;AB' DA;' < ' ?;<HB ' :' UAB ' ,> 2' ,=B' A 0' A,0;@' B; B,;' ;<' <H ,2:' ,=' UB ;' U ;A ' ;AB' % B0:' 1< ;H > ' 2 ,=' A 0' AB,=' M>, ;B 0' ,;' 2B M B :' UAB B' AB' BF;' ,>F 80' , ; @' H D,=B:' ,=' %, <;;B80' ,=' , ;B < W80' ?,E,A8@6' + B B' <>2;80' 2 DA;' A< T0B' B2;' ;<U, =0' ;AB ' 2B ;:' ' ;AB' = B?; < ' < ' ;AB' ,D>0:' ,=' <??>F B=' , BD,=<:' UAB B' ;AB@' , 2B=' ;<' =' , @' $; 0A' <>;F<0;06' 2280' ?< F0' A,E D' HBB ' U ;A= ,U ' HBA =' ;AB' H << ' UA ?A' B ;B 0' ;AB' ,D>0' B, ' ,0;, AB ,6' AB' , ' H<=@' < ' ;AB' , @' U,0' , ' ;<' ;AB' B, :' ' < B' E 0;' ?<2> ' G) B@80' , =' B@ B 80' ?< F0' C,@' ;A,;' DA;' ' , =' ,H<>;' 2?<B ; B7 C> <;80' H E<>,? B=' , <> =' ;AB' ?< EB ;' < ') <00,' B A< ,' =B' 1 ,WB ,:' ,' 0A< ;' = 0;, ?B' ;<' ;AB' 0<>;A' < ' 2?<B ; B6' 22' ;AB' ; <<F0' UB B' ;B H2@' ,; D>B=' H@' ;A BB' =,@0' <EB B ;' ' ;< B ; ,2' , :' , =' A,=' <' < B' , ?A D F<UB ' 2B ;' ' ;AB 6

;' U,0' < 2@' < ' ;AB' <22<U D' < D' I ?;<HB ' J' ;A,;' 1< ;H > ' = 0?<EB B=' ;AB' % B06' 0' ?,E,2 @' A,=' HBB ' < =B B=' ;<' <EB' < U, =' < ' ;AB' ;U<' <,=0' ,? <00' UA ?A' ;AB@' 2,@6' + B 8B' <>2;' ;AB B < B' F>0AB=' < ' . 22, , ?,:' < ' ;AB' A DA' <,=' UA ?A' 0 ;0' ;AB' ,D>07' AB' <> =' 2280' <>;2@ D' F ? B;0' ,;' . 22, , ?,:' = <EB' ;AB ' <>;' < ' ;AB' ;<U :' , =' < ' F,00 D' ;' ?, B' ' 0 DA;' < ' ;AB' 2 B' < ' B=<>H;0' , =' 0?, FB=' A 220 =B' ,H<EB' 2A, = ,:' UA ?A' U,0' , B=' H@' ;AB' +< ;>D>B0B' 2 ; ,' , =' H,? B=' H@' 2280' $; 0A' , ; @6' ;' E,0' F<00 H2B' ;<' ,=E, ?B' > ;AB :' 0<' ;AB' H D,= B :' 2B,E D' , ' ,=E, ?B=' F<0;' ' . 22, , ?,:' = ? E' H,? ' A 0' ;A BB' BD B ;0' ;<' ,0;, AB ,:' , =' 0B ;' A 0' BF< ;' ;<' 1< ;H > 6

A,;' DB B ,2' A 0B2 :' E ;A' ;AB' , ' H<=@' < ' A 0' ?, ' ,2 @:' A,=' <22< EB=' ;AB' <>DA' <,=' < ' 2B M>B ' ;<' % 0H< 6' B' = <EB' ' 0< B' $; 0A' = ,D<< ' F ? B;0:' , =' ;AB ' , EB=' ' < ;' < ' ;AB' E 22,DB' < ' <H ,2:' EA ?A' AB' <> =' <??>F B=' H@' ;AB' , ; @

O ' 1 #) ' $ # " C #' # ' . # * ' a 6

<>;F<0;0' < ' FB ?B 0' = E 0 < 6' B' = =' <;' , ; ;B F; ' ;<' F>02J' > ;AB ' ;A , ;' =, @:' ,0' A 0' 2, D' B?< , 00, ?B' A, =' ?< B' ' 0 DA;' < ' ;AB' 0B?; < 0' < ' ;AB' % B0' HBA =' >=, ' , =' HBA =' 3 H B ,:' UAB B' B=<>H;0' , =' 0<2 =' 2 B0' < ' , ; @' UB B' E 0 H2B6' <H ,2' ;0B2 ' U,0' ??2B, 2@' <;' AB2=' ' < ?B:' < ' = =' ;' < ' , ' ;BD ,2' F, ;' < ' ;AB' $; 0A' F<0 ; < 6' $>;' 1 < ;H > ' B, B=' ;<' , ; ; , ? ' ;:' UAB ' AB' A, =' < 2@' , ' 0 D2B' H D, =B' < ' , ; @' ;<' ;AB' < ;:' UA 2B' , @' ;A<>0, =0' < ' $; 0A' ; <<F0' DA;' 00>B' < ' ;AB' % B0' ;<' <EB UAB2 ' A ' ' AB' ?< ; ;B=' A 0B2 ' ;<' ,' 0B <>0' , ; ; , ? 6' AB' E 22, DB' < ' ;0' <22' U,0' 2B ;' ,2< B' < ' ;AB' F B0B ;:' ;A<>DA' ;' U,0' ;B F; D' ;<' ?< ;B F2, ;B' ;AB' 0B R>N8B' < ' ,' F< ;' UA ?A' 2, @' 0<' , ' < U, = V 2B00' ;A, ' ;U<' 2B0' < ' ;AB' < ;' < ' & B22 D;< 80' ?A<0B ' F<0 ; < 6' $>;' 1 < ;H > ' ?< ;B ;B=' A 0B2 ' U ;A' 0B = D' H, ? ' 1 < =' ;<' 1 ,00B ,' ;A , ;' AB' A, =' ?< B' >F< ' ,' ?< ; ><>0' 2 B' < ' < ; ?, ; < 0' 0; B;?A D' < ' ;AB' ,D>0' H, ' ;<' 0< B' F< ;' UB0;U, 8=:' UA ?A' U,0' <;' @B;' = 0?<EB B=6' " < ' A 0' > ;AB0;' B?< , 00, ?B0' ;<U, =0' > ,' , =' ;AB' ' FFB ' 3 R, = B' A, =' <> =' ;AB' B B @' ' < ;' < ' ;AB :' A<UBEB ' , ' ;AB@' F>0AB=6

1 B, UA 2B' 1 ,00B ,80' ; B=' , ; @' < ' ;AB' , ' N<=@' A, =' ,=B' A, =2@' , @' <EB B ;G ;AB' =' , =' P;A' < F0' 0; 22' 2, @' ,H<>;' 2?<B ; B6' C> <;' ,2< B' U ;A' ;AB' ;2 ' < F0' ,=E, ?B=' ,0' , ' ,0' 1 < A<' =B' >H<:' A, 2 ' U,@' HB;UBB ' 2?<B ; 8B' , =' 2B M>B 6' A>0' & B22 D;< ' U,0' D EB ' ,' UA<2B' =, @' < B' ;<' , , DB' A 0' ; <<F0' ' ;AB ' F<0 ; < 0' ,2< D' ;AB' % B06' ' ;A 0' < D' AB' U,0' ,;AB ' > =B ' ;AB' F B00 < ' ;A, ;' ;AB' " B ?A' , ; ; , ? ' U<>2=' HB' = B?;B=' >F< ' 2A, = ,' , =' 228' ?< F0:' UA ?A:' AB' <H0B EB=:' U<>2=' HB' ,' K ;<>DA' N<H:' =B B =B=' ,0' , 22' ;AB' B ; , ?B0' < ' ;AB' E, 22B@0' , B' H@' B=<>H;0:' , =' ;AB' E 22, DB0' H@' , H, ; ; 0 68' 1 < B<EB :' ;AB' " B ?A' K F<0 ; EB2@' ?<>2=' <;8' DB;' D> 0' >F' ;<' , ; ; , ? ' ;AB' 2 B' UB0;' < ' 22:' 0 ?B:' ' ;AB' BW 0; D' 0; , ;B' < ' ;AB' UB, ;AB :' <' ?, < ' ?<>2=' 2B, EB' ;AB' F, EB=' <, =0:' , =' ;AB' < 2@' F, ;A' < ' ;A , ;' =B0? F; < ' 2B, = D' < ' ;AB' <H ,2' = B?; < ' ;<' ;AB' ,D>0' H, ' , ' ;A <>DA' >=, :' UAB B' , > > =' , =' ;AB' % DA;' * E 0 < ' UB B' <U' ?< < ; , H2@' Y 0; , 22B=6' < 0 =B D' ;' 2 B2@:' ;AB B < B:' ;A , ;' 1 ,00B ,' U<>2=' H D' ,' AB, E@' , ; ; , ? D' < ?B:' H@' ? ?> ;<>0' <, =0' < ' ;AB' B, :' ;<' . 22, , ?, :' ' < =B ' ;<' , B' ,' < ; , 2' , ; ; , ? ' < ' 22' , 2< D'

' 1 () ' #% '' E 6' :' ;<' , > > =6

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;AB' B, 2@' < D:' < ' & B22 D;< ' U 0AB=' ;<' A<2=' ;' C0 2< D' ,0' U,0' 0, B:' < ' ,??<> ;' < ' ;AB' B' E BU' <H;, ,H2B' < ' ;0' <22' <EB ' ;AB' <>;B0' < ' 2B M>B ' H@' UA ?A' ;AB' B B @' >0;' ,FF <,?A6' B ?B:' UAB ' C> <;80' ,=E, ?B=' D>, 8=' ?, B' >F' ' ;AB', ;B << :' ;AB B' U,0' ,' ?<22 0 < ' ,;' <H ,26' AB' ; <<F0' < ' 2,>0B2' ,22@' 0>??BB=B=' ' BWFB22 D' ;AB' $; 0A' <>;F<0;0:' UA ?A' HB2< DB=' ;<' # 0 B80' , =' %<UB80' H D,=B:' < ' ;AB' E 22,DB6' AB' ?,0>,2; B0' UB B' BU' < ' H<;A' 0 =B0 V B;BB ' B ' < 2@' UB B' 2<0;' H@' ;AB' $; 0A' ' AB' B; D' F ? B;0' = =' <;' ,22' H,? ' ;<' ;AB' % B0:' H>;' ??> D' ;<' ;AB' <;AB ' 0 =B' < ' ;AB' ,E B' UA ?A' 0BF, ,;B0' <H ,2' < ' ;AB' 2<UB ' 02<FB0' < ' 1 < ;B' D , ,6' AB@' UB B' < 2@' ' @, =0' < ' ;AB' E 22,DB6

& A 2B' ;A 0' 0 0A' U,0' ' F <D B00' ;AB' , ' H<=@' < ' ;AB' " B ?A' UB B' ,;' 2,0;' 0B;' ' <; < ' < ' 2?<B ; B6' AB' P;A' < F0' ,=E, ?B=' ;A 0' =,@' I ?;<HB ' J' ;<' 1 < A<' =B' >H<' , =' ;;,1' ;AB' =' < F0:' ;, D' ,' <,=' < B' ;<' ;AB' B,0;' 0<' ,0' ;<' 2B, ' ;<U, =0' ;AB' ,D>0:' , EB=' ,;' , BD,=<6' C> <;80' ?< F0' U,0' B ?, FB=' HBA =' <H ,2:' 2,>0B280' = E 0 < ' A,E D' ;0' ,=Y E, ?B=' F<0;0' I$ D,=B' 1? , =J' ' ;AB' E 22,DB:' UA 2B' <2 D ,?' 2,@' ;U<' 2B0' ;<' ;AB' B, 6' AB' UB,;AB ' U,0' 0; 22' ,H< ,H2B:' , =' ,22' ;AB' <EB B ;0' UB B' ,??< F2 0AB=' U ;A' D B,;' ,; D>B' , =' =B2,@6' ' ;A 0' , ;B << ' ;AB' A B ?A' , @' 0> B B=' ;AB' 2<00' < ' ;0' <0;' H 22 , ;' , =' B B DB; ?' ?,E,2 @' < ?B 6' (B B ,2' , ;B ' < W:' UA 2B' BWF2< D' ;AB' ,D>0' H, :' < ;A' < ' . 22B , ?,:' ' 0B, ?A' < ' =B0B ;B=' H<,;0:' U,0' ?>;' ' ;U<' H@' ,' ?, < ' 0A<;' < ' ,' $; 0A' D> H<,;' UA ?A' U,0' U,;?A D' A 0' ?,E,2 @' < ' ;AB' B0;>, @6' B' U,0' AB2=' ;<' HB' ;AB' < 2@' < ?B :' BW?BF;' <2< B2' +B2B;:' UA<' A,=' , @' FB 0< ,2' 2>B ?B' U ;A' A2,00B , :' , =' ,0' ;A,;' 2>B ?B' U,0' ,2U,@0' BWB ;B=' < ' ;AB' 0 =B' < ' =, D' ,?; < :' ;' 0' F <H,H2B' ;A,;' ;AB' , @' " B ?A' = , 0;0' UA<' =BF2< B' A 0' =B,;A' , B' DA;' ' ?< 0 =B D' ;2 ,;' ;' ,@' A,EB' A,=' 0< B' F<0 ; EB' B B?;' < ' ;AB' ?< =>?;' < ' ;AB' ?, F, D

T' ' ;AB' B;BB ' ?,0>,2; B0:' B' HB2< DB=' ;<' ;AB' BU2@ 2, =B=' 420;:' <> ' ;<' ;AB' (B , ' %BD < :' 0 W ;<' ;AB' ?< F, @' < ' ;AB' P (;A' ,;;,?AB=' ;<' # 0 B6' BB' B;> ' ' B?< =' ?B6

' , ;B < W' A,=' HBB ' ;AB' 1 , 0A,280' ?A B < ;AB 0;, "' => D' ;AB' &,D , ' ?, F, D :' , =' U,0' DB B ,22@' BF>;B=' ;<' A,EB' HBB ' B0F< 0 H2B' < ' 0< B' < ' ;AB' H<2=B0;' <EB0' ,=B' H@' 1 ,00B ,80' , @' => D' ;A ,;' FB <=6

^ A,;' " < ' 0' ?< B?;' ' =,; D' , ;B < W80' =B, ;A' < ' ;AB' ;A:', =' *B2,D ,EB', =' <;AB 0' U < D' ' F2,? D' ;' < ' ;AB' 2 ;A:' 0' F <EB=' H@',

BB ' " ' 9 +&$ ' &$$ ') @$ ' R]D(=B

0< B' 0A, F' 0 > 0A D:' UA ?A' 2,0;B=' 0BEB ,2' A<> 0:' ; 22' <2B' = BU' H,? ' A 0' <>;F<0;' 2 B' < ' ;AB' 2<UB ' F2,;B,>W' < ;A' < ' <H ,2' ;<' ;AB' <<;' < ' A 0' DA; D F<0 ; < :' < ' ;AB' AB DA;0' HB2<U' ;AB' +< ;B22<' B=<>H;06' C> <;' A,=' ;A>0' D, B=' ,' 2B' < ' D <> =:' H>;' <;' D <> =' ;A,;' U,0' < ' , @' 0B E ?B' ;<' A ' < ' ,' BD>2, ' ,;;,? ' < ' ;AB' % B0:' 0 ?B' ;' U,0' B B2@' F, ;' < ' ;AB' <22 D' >F2, =' ;A,;' U,0' =< ,;B=' H@' & B22 D;< 80' , ' F<0 ; < 6' AB' O;A' * E 0 < ' 2<0;' ;UB ;@ EB' $; 0A' , =',' >?A' 2, DB ' > HB ' < ' +< ;>D>B0B' ' ;A 0' 2< D' H ? B 6' B EB@' ;AB' +< ;>D>B0B' H D,=B ' U,0' U<> =B=6' AB' " 8B ?A' ?,0>,2; B0' UB B' F <H,H2@' ,' 2 ;;2B' ;AB' 2, DB

' ;AB' 0, B' , ;B << ' B@ B :' U ;A' 0< BUA,;' <EB ' ,' H,;;,2 < ' < ' , ; @:' ,=B' ,' =B;, 2B=' B?< ,00, ?B' < ' 228' F<0 ; < ' ' < ;' < ' 2A, = ,6' B' F B00B=' ' ??<0B' B <>DA' ;<' = ,U' ;AB' B' < ' ;AB' B, B ' B=<>H;0:' H>;' A,2;B=' UAB ' AB' A,=' B,2 RB=' ;AB' 0; B D;A' < ';AB' 2 B' <FF<0 ;B' A :' , =' BF< ;B=' ;<' 1,00B ,' ;A,;' AB' ?< 0 =B B=' ;AB' DA;' U D' < ' ;AB' ,22 B=' F<0 ; < ' A<FB2B002@' F ,?; ?,H2B' < ' , ' ,;;,? 6

) BW;' < D' I ?;<HB ' OJ' ;AB' " B ?A' < , =B A B ' ?, B' >F' ' FB 0< ' < ' ;AB' B, 6' ;' 0' ,0;< 0A D' ;A,;' AB' A,=' ,=B' <' B, 2 B ' ,;;B F;' ;<' N>=DB' U ;A' A 0' <U ' B@B' < ' ;AB' 0; B D;A' < ' & B22 D;< 80' 2 B' < '=B B ?B6' B' , EB=' ,;' <H ,2' ' ; B' ;<' U ; B00' ,' H ;;B ' 0 0A:' ;AB' <0;' F< ;, ;' < ' ,22

8' ' =' ' ;AB' <;B' ;<' (,?A<;80' BW?B22B ;' B= ; < 0' < ' * B2,D ,EB80') 5 %' .%' R ' :5 3' ;A,;' ;AB' 2<00B0' < ' ;AB' " B ?A' < ' ;A 0' =,@' UB B' P4' B :' ;A<0B' < ';AB' ,22 B0' 56' B' 2,0;' 0;,;B B ;' < B' 0> ? B ;2@' F <H,H2B' ' ;0B2 :' ?, <;' HB' EB B=' < ' , @' $; 0A' 0<> ?B' ;A,;' ' A,EB' <> =6' "B2 D;< :' , BWB=' ;<' ;AB' =<?> B ;' < ' F,DB' P ' < ' E<26' E ' < ' ;AB' 1 () ' #%('D EB0' ;AB' 2<00' < ' <2B80' $; 0A' H D,=B0' ' =B;, 2V ;AB@', <> ;' ;<' ;UB ;@ EB' B ' < 2@6' $>;' 2 B' =<B0' <;' D EB' =B;, 20' < ' B EB@80' +< ;>D>B0B:' ;A<>DA' AB' B ;< 0' ;A,;' ;2 B' H D,=B ' U,0' U<> =B=:' , =' ;A,;' ;AB' ;U<' BD B ;0' I)<06' ' , =' ' < ' ;AB' % BJ' = 0; D> 0AB=' ;AB Y 0B2EB06' 2 B@' ,@' UB22' A,EB' 2<0;' ;AB' O' B ' B ;< B=' H@' (,?A<;:' H>;' ' A,EB' <' F << ' < ' ;6' . B B80' >0>,22@',??> ,;B' ' 1, ?AB0' < ';AB' O;2 ' * E 0 < ' 8' D EB0' <' D> B0' < ' ;A 0' =,@:' < ' =<B0' *8 ' H, 80' 1 ;' .8B22 D;<>' B , 0' ;A,;' K' ;AB' ,;;,? ' < ' ;A 0' =,@' < ' (B B ,2' <2B80' F ? B;0' B, ' <H ,2' U,0' U ;A<>;' >?A' B B?;68' ;' 0' ?B ;, :' A<UBEB :';A,;' ;AB' $; 0A' 2<0;' ,' 2 ;;2B' D <> =' ' < ;' < ' ;AB' AB DA;06' 1, ; B 80' < ('%' .%(' % (' ' :C(' %'' =3%((%(' UA ?A' ' 0<' < ;B ' =' < ' >0B:' 0A<U0' ;A,;' C> <;80' ?< F0' 2<0;' ;U<' < ?B 0' 22B=' , =' 0BEB ' U<> =B=:' 22 0:' ,;' ;AB' >0>,2' ,EB ,DB:' U<>2=' F2@' ' ?,0>,2; B06

%& "@ %& 9 & + & 9 #

;AB B D,DB B ;0 ;A,; ;<< F2,?B => D ;AB ? >? ,2 =,@0 < ;AB ?, F, D < 6 FB ?B 80 <>;F<0;0: ,0 A,0 HBB ,A B,=@ B ; < B=: A,= < ;2 B ;A B; B= < 2@ 0< B < < @, =0 < <H ,2: , = A,= ; , B >F ;AB F<0 ; < < ;2 B <;AB 0 =B < ;AB ,E B ;A,; = E =B0 ;A,; E 22,DB < ;AB 2<UB 02<FB0 < ;AB 1 < ;B D ,a: ,6 ? <00 ;AB A DA <,= ;AB , F ? B;: > 0AB= H[;AB 4 0; BD B ;: A,= ;A <U >F ,2 , ?,=B6 C> <; ?< 0 =B B= ;A 0 2<=DB B ;: 0< ?2<0B ;< A 0 2 B: ,0 ,; ;A D ;A,; <>DA; <; ;< HB FB ;;B=6 ??< = D2@ AB H <>DA; >F A 0 , ; ' B @: UA ?A A,= < 2@ , EB= , ;2 B B, < ;AB F BE <>0 DA;: ;< ;AB < ; < <H ,2: , =: , ;B ?, < ,= D ;AB H, ?,=B < ,02N< ; ; B: 0B ; ,D, 0; ; ;AB) 5 (. '$ < ;AB 5;A < ;AB % B: 0>FF< ;B= H@ <;AB ; <<F0 < 1 B , =80 H D,=B6 AB 0; >0A < ;AB ,;;,? ?, B= ;AB H, 8 ?,=B , = ;AB 2 B < 0;< B U,220 < B,?A 0 =B < ;6 $>; ;AB UA<2B < ;AB 4 0; U,0 B,=@ ;< 0>0;, ;AB F ? B;0: , = U ;A ,; B ?B >0A 0UBF; ;AB ,00, 2, ;0 H,? ,? <00 ;AB H, ?,=B: =<U ;AB 02<FB: , = ;< ;AB <>;B A<>0B0 < <H ,26 " < ;AB ?B: < ?<> T0B: ;AB@ A,= ;< B; B: ,0 , UA<2B = E 0 < U,0 < ; D ;AB 7 H>; ;AB@ B0> B= ;AB <2= F<0 ; < U ;A<>; HB D F> 0>B=6

C> <; B >0B= ;< B BU A 0 ,;;,? : , =) ,00B ,: UA< A,= , EB= UA 2B ;AB 0 0A U,0 F <D B00: = = <; = B?; A ;< D< < U, = ,D, 6 ; U,0 ??B, ;A,; ;AB B U,0 , EB @ 0; < D < ?B ; < ; < ;AB ;A < F0: , = ;A,; ;AB B=<>H;0 E 0 H2B ,2< D ;AB 1 < ;B D , N , < ;AB < B A, = , = ;AB +< ;B22< AB DA;0 < ;AB <;AB UB B < ;AB <0; < = ,H2B =B0? F; < 6 1 ,00B ,80 0B < , =B =B ?, F , = ?A B ?< =, ;: +B2B; \ ;A>0 =B0? HB0 ;AB F0@?A<2<D ?,2 0 ;>,; < G K ; , E D ,; <H ,2: 0;B,= < ;AB > =>2,; D ,??B00 H2B F2,;B,>Wc ;A,; UB A,= HBB ;<2= ;< BWFB?;: UB 0,U 0;BBF2@ 0?, FB= <> ;, 0 , = =BBF ,E B0: , <,= F,00,DB < 2@ , BU F,?B0 H <,=: , = < B,?A 0 =B U,220 < <? ? <U B= U ;A BEB @;A D ;A,; ?<>2= HB ,??< F2 0AB= ;AB U,@ < B2= < ; ?,; < 0 D, 0AB= U ;A , ; 22B @7 ;AB , ;; 2,0; ; U,0 F2, 2@ =B < 0; ,;B= ;< >0 ;A,; UB ?<>2= <; , ;;,? ;AB % B0 < 1 < ;B?A M>B U ;A ;AB : < P: B ;A,;

8 "< A 0 F<0 ; < , =?A, ,?;B : 0BB F6 5 < ;A 0 E<2> B6
7 2 0 D> B 0: < ?<> 0B: , 2>= ? <>0 BW,DDB ,; < 6 1 ,00B , A,= 0; 22 < B ;A, 6 : B 6 #EB < C, 6 : : , ;B 0> B D ;U< < ;A0

OOO 1 2 2) $ # " # # . # * A !2

0; 22 B , B= < ;AB , @6 "< : BEB UB A, < ?B= 0< B F< ; < ;AB % B0: UB 0A<>2= <; A, EB A, = B <>DA B 2B ; ;< 0B RB , = <??>F@ % 0H< 6 6 6 ; ; U, 0 ?2B, ; ;A, ; UB >0; U, ; < B < ?B B ;0 A8 <;AB B@B U ; B00: C> <;80 , =B =B ?, F * B2, D , EB: A 0 % ' '#%) 5 '+0+" ++ BWF B00B0 ;AB 0, B E BU A 0 0 D2B 0B ;B ?B: BWF2, D ;A, ; K ;AB F ?B: 0BB D ;A, ; ;AB B B @ U, 0 HB;; B F BF, B= , = 0; < DB ;A, A, = HBB HB2 BEB=: F>; , B = ;< ;AB ?< H, ;: , = < B, ?A 0 =B ;AB ; <<F0 ;<< > F < ?B < B ;AB < D , F<0 ; < 0 . AB 2<00F ;A 0 ?< H, ; V 0 D ?, ; B <>DA ;0B2 : H>; =B? 0 EB ;A, ; ; BEB, 2B= ;<) ,00B , ;AB >0B2B00 B00 < , > ;AB , =E, ?B V U, 0 P4 < ;AB $; 0A 0 =B: , H<>; < ;A, ; < ;AB " B ?A T

;B F>; ; D , 0; <F ; < ;AB ?< H, ; < <H , 2: 1 , 00B , <=B , U, @ B, 0; U, = : , 2< D ;AB 02<FB0 < ;AB >F2, = ;A, ; , ?B0 ;AB 1 < ;B D , , : , = , 0 , , 0 ;AB <22 , ? D >= , ;AB < ; < ;AB % DA; _; J E 0 < 6 B B AB F B00B= 0< B, ;AB $; 0A < ; ;A, ; , 0 D2B 0A<; U, 0 B= , ; A 0 B0?< ; < ;AB B=<>H;) <6 ; ;< U, A ; < ; B0F, 00 < 7AB 6 B 0, 2>; B= ;AB H, ; ;B @ H@ 2 ; D A 0 A, ; ; < ; : , = UB ; >F ;AB A 22 <>; < , DB ' < B < A 0 , =B0 =B ?, F ?< ; >B= ;AB

< B < > ;<2= F E, ; < : ;2 B @ < +< ;>D, 2 >, 0 0; 22 OO: 0; < D: F2>0 0 ? , = B =B; , ?AB=6

8 +B2B;80 @))% . % 3 8 : % % . T%) : 5 % F6 < E<26 6\W < H %' %(' %'' A: %'%([

^ * B2, D , EB: F6 6

^ ;AB 0 W;@ 0BEB $; 0A ?, 0>, 2; B0: ;A ;@ B DA; UB B ;AB 4 0; ; ;AB B0; ;AB B DAH<> D H D, =B0 < ;AB 0; * E 0 < 6) < 2 V UA< A, = ?A, DB < ;AB H, ; ;B @ , ; <H , 2: B0; , ;B0 ;AB " B ?A 2<00 , ; V EB @ F <H, H2@ ;AB ?< B?; < B: , 0 1 , ; B 80 2 0; 0 0A<U < B < ?B 22B= , = 0 W U<> =B=: , 22 1 B , =80 H D, =B6 2 0 0A<>2= B, ?, 0>, 2; B06 * B2, D , EB D EB0 ;AB A DAB D> B < 22B= , = U<> =B=: F <H, H2@ , <EB 0; , ; B B ;6

K 1 , 00= , U, 0 ?2B, 2@ 0BB < ;AB $; 0A % B06 %B ;A , @: , 0; , < ?B < ;AB ;A * E 0 < : <; B= K , ? <U= < < ?B 0 < A< 0BH, ? : = , D<< 0 U ;A 2B= A< 0B0: , = , 22 ;AB ?< ; h B < , DB B , 2 ?A B 8 SK ' 2% F6 O5J: , = 0, U ;AB 1 , 0A, 2 = 0 <> ; H@ ;AB U = 22 , H<\ B <H , 26 B U, 0 U, ; ?A D < + , ? 80 B=<>H; : < ;AB A 22 N>0; <FF<0 ; B: ;A <>DA A 0 ; B2B0?<FB: , H<>; : @, =0 < ;AB " B ?A < ;6 ; 0 C< B0 UA<: < F6 O < A 0 < %(' $ %(' H%. (' D \80 ;2 B , B?=<; B , H<>; ;AB 1 , 0A, 28 0, 2>; B6

S 1 #) ' #" ' # ' ' 9 O

BWF2< , ; < ' ; 22' ;AB@' ;<>?AB=' B@ B 8O EB=B;;BO' B, ' . 22, ' , ?,:' H>;' ;AB' 1 , 0A,2' A 0B2 ' B;> B=' ;<' A O' AB,=' M>, ;B ' ,;' 2B M>B ' ;<' ;A ' <EB ' ;AB' 0 ;>, ; < 6' AB B' 0< B' 0< ;' < ' ,' ?<> ? 2' < ' U, ' U,O' AB2=' ;A , ;' 0, B' DA;6 C> <;:' ;' O' 0, =:' > DB=' ;AB' A B ' ;<' ; @' ;AB' B B?;' < ' ,' H<2=' =, 0A' , ;' ;AB' # D2 0A' , @' , ,@B=' ' < ;' < ' <H ,26' $>;' AB' U,O' ; ,2 B=' =<U ' H@') B@' , =' B@ B :' UA<' , D>B=' ;A , ;' 0>?A' , ' , ; ; , ? ' U<>2=' HB' 0, B:' ?< 0 =B D' ;AB' UB, B00' < ' ;2 B ' ?< TFO' , =' ;AB' 0; B D;A' < ' & B22 D;< 8O' < ; ?, ; < 06' & ;A<>;' =<>H;' ;AB@' UB B' DA;7 BEB ' ' 1 ,00B ,' A, =' H <>DA;' A O' UA<2B' ;A BB' ?< FO' ;<' HB, ' < ' <H ,2:' AB' A, =' : ' B ' 2B00' ;A, ' , ;' $>00, ?<:' , =' & B22 D;< 6 ' B ' < B:' 2B, E D' ;AB' D, 0< O' < ' ;AB' < ;O' <>;' < ' ;AB' M>B0; < 6' AB' ,22 BO' A, =' : ' H, @< B;O' ?< ?B ; , ;B=' < ' ;AB' ;A B, ;B B=' F< ;:' , =' ?<>2=' A, EB' H <>DA;' >F' 22:' ,> > =:' , =' , 2;< 8O' , =' %B' < 8O' +< ;>D>B0B V : ' B ' < B V < ' ;AB' B, 0;' B =' < ' ;AB' % B0:' ;AB' < B ;' ;A, ;' ;' U,O' ?2B, ' ;A, ;' B@ B ' U,O' <' 2< DB ' ' < ;' < ' ;AB 6' AB' F<0 ; < :' <U D' ;<' ;AB' < ;O:' U,O' , ' 0; < DB ' ;A, ' $>00, ?<:' , =' ;AB' " B ?A' ?, E, 2 @' U<>2=' A, EB' HBB ' ,O' >0B2B00' < ' ?;<HB ' ' ,O' ;' A, =' HBB ' < ' BF;B HB ' 46' AB' BF< ;' UA ?A' "<@' = BU' >F' < ' 1 ,00B ,' , =' F B0B ;B=' ;<' ;AB' # FB < ' D EB0' ;AB' UA<2B' D 0;' < ' ;AB' , ; ;B 6 K' AB' 1 , BA,2' + ?B' < ' #002 D' A,O' ?< B' ;<' ;AB' ?< ?2>0 < ' ;A, ;' AB' U<>2=' ?< F < 0B' ;AB', @' < ' 0' 1 ,NB0;@' ' AB' UB B' ;<' , ; ; , ? ' ' < ?B' 2 BO' 0<' < =, H2B:' =B B =B=' H@ 6 ' # D2 0A' , =' : ' +< ;>D>B0B:' , =B=' H@' : ' , B=' FB, 0, ;0

' <FB ' ,00, >2;' < ' ;AB' <H ,2' F<0 ; < ' U,O' <U:' =BB=:' ;AB' ;A D' ;A, ;' ;AB' $; 0A' <0;' =B0 B=6' & B22 D;< ' U 8<;B:' U ;A' A O' >0>,2' < ?,2' <=B , ; < :' ;<' A O' ; >0;B=' 2 B>;B , ;:' ,>Y > =:' ;A, ;' K AB' ;A<>DA;' A O' , , DB B ;O' A, =' <U' ,=B' ;AB' F<0 ; < ' ;<2B ,H2@' 0B?> B' < D' ;AB0B' 2, 0;' , , DB B ;O:' ;' ,@' HB' B , B=:' U,O' ;AB' = ,U D' H, ? ' < ' ;AB' 4 0;' , =' ;AB' 2 DA;' ?< F, BO' < ' ;AB' 0;' * E 0 < ' < ' ;AB' H, ?, =B0' < ' ;AB' B, ' 0 =B' < ' ;AB' ,E B' < ' <H ,26' AB@' UB B' <EB=' ,' BU' A> = B=' @, =O' ;<' ;AB' B, :' B, B ' ;<' 3 H B ,6' A O' U,O' F <Y H, H2@' ;B =B=' ;<' B ?<> ,DB' ;AB' " B ?A' ;<' 0, 22@' <>;' < ' <H ,2' >F' ;AB' <, =:' UAB B' BEB @;A D' U,O' <U' ' < =B ' ;<' B?B EB' ;AB 6

' BB' "<@8O' H %' 3 ' %' FFB = W:' F6' O 6

' . B2 < ' ;<' , > =:' 1 () ' #%(' E 6' F6' 6 46

AB ,=E, ?BU,0A<> 2@BWFB?;B=7 *8 ' H, :$B B0 < =80 A B < ;AB ;, N U <;B D2BB >22@ < ?;<HB :N # ,?A = E =>,2 = E 0 < A,0 <U < B;A, 0> ? B ;; <<F0;<<???>F@;AB 0F,?B ,22<;;B=;<;:, =;AB <EB F2>0 < 0,0;B0B EB < B,?A B0FB?; EB2@6 ;AB < ?B ;A>0 F<0;B= HB,;0 ;AB ,;;,? D B B @:< UA ?A;AB B?, HB 2 ;;2B=<>H;:<> ;B2BD ,FA ?7 ?< Y > ?,;< 0 U 22 H D =<U 8,> > = < >=,, =22 < 2A, = ,< ;<;AB 2, V, =;AB, , U 22 HB?< F2B;B6 AB B 0 >?A,FFB, , ?B;A,;;AB B B @G 33,;;,? ;A 0 F<0 Y ; < U ;A A 0 UA<2B < ?B V 2A, = , 0 , ;<<0; < D < A 6 B ?, <;UB22 B; B:, =;0 A<FB=;A,;A 0 = 0; B00 < F <Y E 0 < 0 U 22 ?< FB2 A ;<H D ,;;B 0;<,0FBB=@=B? 0 < $>;H<;A;AB ?,>; <>0 < , =B A B , =;AB B,DB AB,=< ;AB +< ;>D>B0B ;, UB B 0;, B 0; ,; D;AB F<0 ; < 6 AB@A,=N>=DB= U < D2@;AB?A, ,?;B < 1,00B ,:, =A 0 F0@?A<2<D?,2 F<0 ; < < ;AB < B ;6 B U<>2= <;,;;,? 7 =BB=:, ;B ?;<HB =B AB 0BB 0 BEB ;<A,EB A,=;AB6 2B,0; ;B ; < < =< D 0<6 AB 2B00< < $>00,?< A,= <;HBB 2<0;:, =AB U,0 <2< DB F BF, B=;<,00, 2:U ;A ,2 DA;AB, ;:;AB D2< +< ;>D>B0B @F<0;B= B,=@;<B?B EB A ,0; < D F<0 ; < 6 8 <H,H2@;AB B B DB; ?0;,;B B ;<) B@, = B@ B ;A,;;AB@=, B= <;0 ;AB B V;A,;;AB; <<F0 U<>2= HB=B < ,2 RB= <=B B=;<,=E, ?B < ,0B?< =02,>DA;B V,20<A,= ;0 B B?;< ;AB 1, 0A,26 $>;1,00B ,U,0 F <>=, = <H0; ,;B:, = AB ?<>2= <;D< < U, =:AB 0A, : < ;AB < B ;: < D< D H,? 6 ?;<HB = HBD, ;AB< B FA,0B < ;AB ?, F, D UA ?A;AB $; 0A: < DB B ,2=<U ;<0>HY ,2;B :A,=2B,0;BWFB?;B=6 AB " B ?A, @HBD, ;<0A<U 0 D 0 < ;B = D;<0B;;2B =<U < ;< ;AB % B0:,0 < ,H2<? ,=B6 ;B ,BU < B,;;B F;0;<BB2;AB < ;< ;AB % B0,H<>;>=,, =;AB E,22B@< ,2, = R:UA ?A UB B 0< BBH2B;A,;;AB@= =<;BEB = EB ,> > =80 <>;F<0;0:;AB B B @HBD, ;<< ; @;AB < ;< A 0 F<0 ; < U ;A B2= U< 0:, =0B ;,U,@;AB UA<2B < A 0 ?,E,2 @;<;AB B, V,0> ?B ;0 D ;A,;A 0 < B 0 EB F<UB U,0 0FB ;6

1,00B ,80 0;= B, < ,0 D;AB % B0 H@,?2<0B H2<? ,=B U,0 ,H0<2>;B2@ F ,?; ?,H2B:?< 0 =B D;AB F B0B ;0;,;B < A 0 0>FF2 B06 AB ; <<F0 UB B ,2 B,=@2 E D < ;AB D2B, D0 <

T *8 ' H, 80 ? 3 > =B ?;6 P6

;AB' A,0; 2@ BE,?>,;B=' E 22,DB0' < ' ;AB' % 0H< ' +B 0>2,:' UA ?A' ?<>2=' <;' 2,0;' ;AB ' < ' 2< D:' , =' U<>2=' <;' BEB ' A,EB' 0> ?B=' < ' ,' UBB 80' ?< 0> F; < ' ' .B22 D;< 80' =B? BB0' A,=' HBB ' F <FB 2@' ?, B=' <>;6 'AB' U,0' ;<' BB=' A 0' , @' < ' ;AB';A ' B0<> ?B0' 2B ;' HBA =' H@' ;AB' +< ;>D>B0B:' 1,0608 ,' U<>2=' 0<< ' =' ;' B?B00, @' ;< 0F B,=' ;' , ' , =' U =B7 0 ?B:' 'AB' BF;' ;' ?< ?B ; ,;B=' ' < ;' < ' & B22 D;< :' ;' U<>2=' 0<< ' D<' ;<' F B?B0:' BWF<0B=' ' H E<>,?0' ;<' ;AB') <EB HB ' , 0:' , =' < ?B=' ;<' = 8,U' ;0' <> 0A B ;' H@' , ,>= D' < ' , , 6 ;' 0BB 0' < ' ;AB' 0; >?; < 0' UA ?A' AB' D,EB' ;<' +<@' ,;' ;AB' B =' < ';AB' 0B?< =' UBB ' < 'A 0' 0;,@' ' < ;' < ' % 0H< :' ;A,;' ;AB' 1 , 0A,2' ,?;>,22@' ?< Y ;B F2,;B=' ?2 D D' ;<' A 0' F B0B ;',=E, ?B=' F<0 ; < ';' 22' AB' 0A<>2=' B?B EB' B < ?B B ;06 B' A<FB=' ;A,;' ;AB' 5;A' < F0' U<>2=' ?< B' >F' ;<' A 0' , =' < ' 2=' ,0; 2B:' , =' ;A,;' 1 < ; B ' , =' ;AB' ;A' < F0' U<>2=' N< ' A ' < ' =,2>0 ,6 $>;' ;AB0B' UB B' B B' A@F<;AB0B06 AB' U,0' <;' ' ;<>?A' U ;A' B ;AB ' * <>B;' < ' 1 < ; B 6 =BB=:' AB' A,=' HBB ' ?>;' < ' < ' ,22' ?< > ?,; < ' U ;A' A 0' ?<22B,D>B0' 0 ?B' ;AB' =,@' ;A,;' AB' ? <00B=' ;AB' 1 < =BD<6 AB' 5;A' < F0:' ,0' ,' ,;;B ' < ' ,?;:' U,0' < 2@' ,;' . ,22,=<2 =:' , =' 0A<UB=' <' 0 D 0' < ' <E D' < 6 1 < ; B ' A,=' B; B=' ;<' ;AB' <> ;, 0' ' < ;' < ' BE 22B:' , ;B ' A 0' 0>??B00B0' <EB ' ;AB', @' < '%,' < , ,' ' BF;B HB 6 2 B =,' U,0' ' ,' 0;,;B' < '??<0B' H2<? ,=B' H@' 2EB ,80' =B;,?A B ;0' < ' HB@< =' ;AB' *<> <6 >=,=' <= D<' U,0' 'A, =2@'HB;;B '?,0B:'HB D' 0; ?;2@'U,;?AB=' H@' C>2 , ' , ?ABR' , =' A 0' <> ;B=' D>B 22B <0:' 0<' ;A,;' <' < B' ?<>2=' DB;' ;<' < ' < ' ;' U ;A<>;',' EB @' 0; < D' B0?< ;6 (, =, B80' BD B ;' < '= ,D<< 0:' 2B ;' HBA =' H@' 1,00B ,:' U,0' U< ' <>;' ' ;AB' B < ;' ;<' BBF' <FB ' ;AB' <,=' HB;UBB ' <= D<' , =' ,2,' C , ?,'A' " < ';AB' @' B ;AB ' 2 B =,' < ' <= D<' B?B EB=' ,' U< =' < ' BU0' < ' ;AB' ;A' < ' BF;B HB ' ;<' ;AB' ;A' < ') <EB HB 6 <' B B?;>,22@' U,0' ;AB' <,=' ??<0B=:' ;A,;' > <> 0' UB B' ?> B ;' < '0>?A'= EB 0' ?A, ,?;B 0',0' ;A,;' 1,00?A ,'A,=' < ?B=' ;AB' # D2 0A' ;<' B H, :' , =' ;A,;' AB' A,=' HBB ' ?< F2B;B0[' < 2B=:' , =' U,0' , ?A D' H,?' ' ;<' F, ' E ,' (,0;B22<' $, ?<6 +, 0' U,0' A, =2@' HB;;B ' < B=6 ;AB' < 2@' BU0' ;A,;' ;AB' # FB < ' D<;' U,0' ;A,;' = HH2B=' <>;:' <> ' < ' EB' UBB 0' 2,;B :' H@' ;AB

8' "< ';AB' 0B B0', =',DB 0' < '2 B' ' <= D<:' 0BB';AB' ('< ';AB' *>?AB00B' *8 H , ;B06 B ' 2B;;B ' ;<' C> <;:' ;B ?BF;B=' H@' . B22 D;< :' ;B220' ;AB' 0, B' ;,2B6 ;' 0' ;<' AB' <> =' ' *8 ' H, 80' ?<22B?; < '< '=<?> B ;06

< (,0;B22< $, ?<:, =, F, 0A=B;,?A B ;< ;A BBH,;;,2 < 0 > =B , 2<0 *8#0F, ,: UA ?A %, < , , A,=0B ;;<. 22, .B2A,: ,;;ABO, B ; B;A,;ABO;<< A 0;U< = E 0 < 0 > =B %, , B ,, =A, 2B0 8*< B22U;A ;ABO% B06 ;ABO =B< ;ABO ;2, ; ?;ABD, 0< < +B ?ABA,=0B ;<>;, < ?B< B ;<H =<0:> =B ,F;, "B U ? :, =;AB0BN< B=A, =0U;A*B(,@80?,E,2@ ,;, ,2A,2: < <;< < B0 .B= ,06 BU" B ?AF, ; B0UA ?A? <00B=;AB1 < ;B C> ;, ;<, =;<U, =0;AB0B,?<,0;UB B ?>;< B ;AB H@"B U ? < H@;AB= ,D<< 06 $>;1,00B ,BEB 0B ;, @0B <>0=B;,?AY B ; ;A 0= B?; < 6

"< N>0;< B < ;AI ?;<HB OV)<EB HB OJ 1,00B , , ;, B=A 0F<0 ; < < ;< ;AB% B06 AB ;A < F0 A,=;A <U >F 0< B B, ;AU< 0 < :, =;< ;AB 2, 0 < :;AB A 22 < <H ,2:;A>0,00> D,=B B 0 EB 0;B,=< , < B 0 EB F<0 ; < 6 AB =< F0 UB ;H,? ;< , BD,=<: H>;2B ;0; < D =B;,?A B ;0 . 22, , ?,6 $@;AB = 0F<0 ; < 0 < ?;<HB P;ABP;A < F0 B , B=U;A;0 , H<=@, ;; ;;, : , ;<;AB B, : , =, ,=E, ?B= D>, =, ;2B M>B 6) B@ U,0 0< F2,?B=;A, ; AB ?<>2=0>??<> B ;AB < ;AB <;AB ?< F0 ;AB@ UB B , ;;, ? B=6 H D,=B< %< 0< 80 = E 0 < U,0 F>0AB= < U, =;< ;AB A 22 <FF<0 ;B >=, G ,?B< ;A 0 2,0; ,> > =U,0 ,=< D ;AB < ;< < A 0 2 B U ;A, 2>W> @ < ,H,;; 0: B ;, D2B B ;0:, =F ;,220: UA ?A U<>2=A,EB ,=B ;AB A 220 =B ,??B00 H2B ;< BEB ;AB <0;,2B ;, =E D< <>0 FB 0< <E D,2< B6 "< B=; <<F0 ?<>2=<;A,EB D<;F,0;;AB 0;;U< < ;A BB; ,F06

$>;;AB <0;0 D ?, ;F, ;< 1,00B ,80, , DB B ;0 E,0 ;< HB <> = A 0 B, G 1 < ;H > 80 ?,E,2@ B0B EB EB ;H,? ;< , ;, B 7 ;A ;AB ,20< EB ;;AB B0B EB, ;22B @< ;AB 4;A: , =;AB A<0F ;,20 < ;AB ;A < ?;<HB 6 ;;AB 0, B ; B B,?A < ;AB ?< F0 E,0 = B?;B=;< 0B =;< , ;, B ,22 0 ;A0: ?, FB ;B 0: , =<;AB , ; ?B 0;A,;?<>2=HB <> = ;0 , 06 AB@ UB B;<2=;< BF< ;;< (B B ,2#H2I :;AB< ?B ?< , = D ;AB , ;22B @: UA< A,= B?B EB= < ;AB 1, 0A,2 ,0FB? ,2 00 < V ;AB ?< 0; >?; < < H<,;0 , =F< ;<< 0 0> ?B ;;< H =DB ;AB ,D>0 < ;AB 3BRB B6 "< : AB EB B 0;, EB= <>; #0; B ,=> ,: 1,00B ,A,=;A 0 =;A,;AB DA;=

T "B B@80 H D,=B: UA ?A A,=,2 B,=@ ,?B= ,> > =,;$>00,?<6

1)6 22 P D

O ' 1) ' $ # " #' # ' . # * ' A ' 4 ;' ?< EB B ;' B ;AB ' ;<' ? <00' ;<' ;AB' 2B ;BN<:' < ' ;<' < ?B' ,' U,@' ,? <00' ;AB' 3BRB B' ;<' ;AB' (,0;B22<' $, ?<' = 0; ?;:' ';AB' A<FB' < ' <FB D' ?< > ?,;< ' U ;A' F, ' E ,' 3, R,' , =' 2?, ;, ,6' 1 < ;H 8O' ?,E,2 @' BWF2< B=' < ;AU, =' , =' B,0;Y U, =:' 0BB D' < ' 2 B2@' 0F<;0' ,;' UA ?A' ;AB' ,D>0' DA;' HB' H =DB=:' , =' < ' ;AB' <;AB ' 0 =B' B?< < ; D' ;AB' 2 B' < ' ;AB' 3BRB B:' ;<' 0BB' A<U' ;' U,0' AB2=6) <;' ,' H<,;' ?<>2=' HB' <> =' < ' ;AB' D 8B,;B ' EB 7 ,;' A, >0?,' ,' =, D' F, ;@' < ' ;@' B ' 0U, ' ;0' H <,=' ?> B ;:' < ' ,' =,0A' ,;' 0< B' H, 0' UA ?A' UB B' E 0 H2B' < ' ;AB' <;AB ' 0 =B:' H>;' ,22' UB B' <> =' ;<' A,EB' A,=' ;AB ' H<;;< 0' ?, B >22@' <? B=' <>;' , =' ;<' HB' 22B=' U ;A' 0, =6 * BNB, :' ;AB' < ?B ' UA<' BWF2< B=' ,0' , ' ,0' +> AB;B' < ' ;AB' 3BRB B:' <> =' ,22' ;AB' H =DB0' H < B :' , =' ;AB' D, 0< ' < ' H , ;B0' U,;?A D' ;AB' < =0:' U ;A' 0; < D' =B;,?A B ;0' ,;' +> AB;B' , =' 1, ; ?AB26

#H2B' <> =' ,;' , ;, B ' ;A,;' AB' A,=' ;<' ? B,;B' ,' F< ;<< ' BM> F,DB' U ;A' <' ,;B ,20' ,;' ,22' ;<' U< ' < 6' AB B' U,0' ,U' < ' ' ;AB' H, 0' , =' H,2?< B0' < ' A<>0B0:' , =' ,U' ; HB ' ' ;AB ' 2<< 0' , =' , ;B 0:' H>;' <;A D' B20B6 0' 0 ;A0' A,=' ;<' 0;, ;' < ' ;AB' UB, @' ;,0 ' < ' < D D' 0,U0' , =' A, B 0:' A 0' ?, FB ;B 0' A,=' ;<' ;> ' A<>0BH B, B 0V ' ;AB' ;B?A ?,2' 0B 0BV ;<' <H;, ' F2, 0' , =' N< 0;06 0' ;,0 ' U,0' A, =:' , =' U<>2=' ??2B, 2@' ;, B' , @' UBB 0' HB < B' ;' ?<>2=' HB' F <FB 2@' ,??< F2 0AB=6

1B, UA 2B' ; B' U,0',22 F<W;, ;' ;<' 1,00B ,:' < ' BEB @' =,@' ;AB' ?<> ; @' HB;UBB ' , ;, B ' , =:' ;AB' % B0' D BU' H, B ' , =' @B;' < B' H, B:' ,0' ;AB' < ,DB 0' < ';AB' ;A BB' " B ?A' ?< F0' U< B=' ;AB ' U 22' >F< ' ;6' AB' B ' UB B' ,2 B,=@' D< D' ;<' A<0F;,2' H@' ;A<>0, =0:' , =' =@ D' ;AB B6' C> <;8O' ?< 0? F;' H,;,2 < 0:' > 0AB2;B B=' < ' ;AB' , ' ' ;AB ' H2B, ' H E<>,?' ,H<EB' <H ,2:' 0> B B=' <0;V) B@8O' , =' B@ B 8O' B ' UB B' I < ' ;AB' <0;' F, ;J' A<>0B=' ' <;' B=6' AB' @:' UA ?A' A,=' P : ' B '< ' 2B,E D' 2 B =,:' , =' : ' , ;B ' ;AB' 2<00' < ' < H ,:' A,=' =U =2B=' =<U ' ;<' : ' B B?; EB' 0,H BO' , =' H,@< B;0' H@' ;AB' < ;A' < ') <EB HB

& B22 D;< ' U,0',2 B,=@' F< =B D' < ' ;AB' F<00 H 2 ;@' < ';, D

T ??< = D' ;<' & ' F6' 5 :' ;AB' < D' 0;,;B' < ') <E6' '0A<UB=' < 2@' OP:P5 ' B ' B "B?; EB6 $>;' ;AB' D> BO' < ' ;A,;' < ?B ' , B' ,2U,@0' ,' 2 ;;2B' 2<UB ' ;A, ' UA,;' ' A,EB' <> =' ' ;AB' < ? ,2' =<?> B ;06

;AB < B>0 EB B A, = B?B EB= A> = B=0 < =B0B ;B 0 => D ;AB 2,0; BU UBB 0 , = BU H@ ;AB B, 0 < ;AB 0B ,H2B ?< Y = ; < < ;AB B B @V < ;AB ,?; ;A, ; ;AB ?,E,2 @ A, = B, 2@ ,22 HBB 0B ; ;< ;AB B, : , = < ;AB , ; ;B F; ;A, ; U,0 HB D ,=B ;< ? B, ;B , H =DB BM> F, DB , ; , ; , B 0 = 0F, ;?AB0 < ?;<HB 4 , =) <EB HB ; ;< %< = % EB F<<2 ; B, ; , ; 2B D;A < ;AB , =E, ; , DB0 , = = 0, =E, ; , DB0 < , 00, 2 D ;AB " B ?A ;AB F B0B ; F<0 ; < B 0B;0 < ;A ;AB 0; B D;A < A 0 <U , @V 5: $; 0A ; <<F0 F B0B ; U ;A ;AB ?<2<> 0: , ;B =B=>?; D 0 ? , = B =B; , ?AB=: O: +< ;>D>B0B B B?; EB: , = : < %, < , ,80 F, , =0: , D , ; <; , 2 < :P 6 B B >0B0 ;< ?< ;B F2, ;B ;AB >0B < ;AB 2 ; , : , ; 8@ < , ; 22B @: ;AB B2=7 ?< 0 =B D ;AB HBA, E <> , ; $>00, ?< , = B20BUAB B: K 0A<>2= =B?B EB @0B2 ? ?<>2= BWFB?; : < @<> %< =0A F ? 0A<>2= 0; , ; B: ;A, ; , @ , =E, ; , DB U<>2= HB =B EB= < ;AB ,00 0; , ?B , < B 0 EB <FB , ; < , D, 0; ;AB B B @68 ;AB <;AB A, = : AB B0; , ;B0 1 ,00B ,80 DA; D < ?B , ; : B V , 02 DA; 0?, 2?>2, ; < : < ;AB B UB B < 2@ : B B?; EB , ; ;A 0 < B ; : , = < ;AB0B O: ?, E, 2 @ , = < B H D, =B < , ; @ UB B , ; , ; , B , = <;AB = 0; , ; SJ2, ?B0: < UA ?A ;AB@ ?<>2= <; A, EB HBB U ;A= , U < , H, ; ;2B 0>==B 2@ < ?B= >F< ;AB , ?< F06 1 ,00B , ?<>2= B, 22@ A, EB F>; < < B ;A, OO: B 2 B U ;A ;UB ;@ <> A<> 0 < , , 2, 6 . B22 D;< ;AB F <?BB=0 ;< , D>B ;A, ; AB >0; , B , < ; , 2 , ; ; , ? : < AB = BU , EB @ 2, DB < ?B < ; < ;AB % B0: < =B ; <, 00, 2 ;AB B B @80 , H@ , U =B B ? ?2 D , ?A: K ;AB BE ; , H2B ?< 0BM>B ?B < , ; ;B F; D 0>?A , , <B>E B U<>2= HB ; <FB 0< B < B < < ;AB < ;AB DW B, ; <, =0 ; < % 0H< : , = ; < <> 0A FF D: < UA ?A ;AB B B @ U<>2= ; , B B= , ;B , =E, ; , DB ; < , ; ; , A 0 <HNB?; 68 ??< =Y D2@ K UB >0; ?, @ ;AB F<0 ; < 0 H@ , < ?B: , = ;AB ?<> 0B < ;AB <FB , ; < >0; = , U ;AB , @ <>; < ;AB ?, Y ;< B ;0: , = BWF<0B B , = A< 0B0 ; < ;AB ??B B ? B0 < ;AB UB, ;AB , ; ;A 0 ; B < ;AB @B, 68 1 < B<EB : 1 ,00B , UB B =B B, ;B=: ; U<>2= ?, >0B <>2; ; < BE, ?>, ;B (, , =, : , 0B ;AB

0 * 5 * @8 A2 80 . 2 1 "*/- A- 0 -2 1 2 210 K * . -0- - 02 /- .(8

T BB M B22 D;< ; < %< = % EB F<<2: 1 () ' #%(E 6 P O6

^ BB B0FB? , 22@ ;AB 2< DB = 0F, ;?A <) <E6 : < FF6 H =6

O O' 1 #) ' $ # " #' # ' . # * ' A '9!

, F , ;:' , =' A , EB' < ?B=' ;AB ' ;<' B; B' < ' , ; , B ' < ' 0< B' 0>?A' = 0; , ;' F< ;:' ' < =B ' ;<' ?< F2B;B' ;AB ' N> ?; < 6' #EB ' A , =' ;AB@' 0>??BB=B=' 'N< D:' 1 , 00B ,' U<>2=' A , EB' A , =' ,' =B < , 2 RB=' , @' < ' 2 ; ;2B' <EB ' : ' B ' B , D6' ;' 0' ?B ; , ' ;A , ;' AB' >0;' A , EB' B >0B=' ;<' DA;:' , =' A , EB' 0; , ;B=' < ' ,' = 0 , 0; <>0' B; 8B , ;' B ;AB ' H@' (, 0;B22<' $, ?<:' < ' < B' 2 B2@' H@' A< , 6' " < ' ;AB' 2 , ; ;B ' = B?; < ' U<>2=' A , EB' H <>DA;' A ' ;<' A 0' H , 0B' , ;' 2 B = , V ;AB' < B ' U<>2=' A , EB' ; , B ' A ' ;A <>DA' , ' , 2 <0;' > A , H ;B=' ?<> ; @:' ;<' ,' F , ;' < ' F , :' ;AB' = , D>0:' UAB B' <' " B ?A' , @' U , 0' B , =@' ;<' B?B EB' < ' 0>??<> ' A 6

;' 0' F<00 H2B:' ;AB B < B:' ;<' =<>H;' ;A , ;' & B22 D;< ' A , =' ,' D B , ;' <FF< ;> ;@' HB < B' A 6' ! B;' ;' 0' B , 0@' ;<' 0B?' UA@' AB' B >0B=' ;<' ; , B' ;6' ' B B' E ?;< @' < ' ;AB' 0B?< =' ?2 , 00 V ;AB' ;A >0; D' < ' C> <;' <>;' < ' A 0' F<0 ; < 0:' <;' <22<UB=' H@' ;AB' ?< F2B;B' , A 2 , ; < ' < ' ;AB' ;A' < F0 V U<>2=' A , EB' =< B' < < B' < ' A ' ;A , ' AB' A 0B2 ' 0; , ;B=' ' ;AB' , H<EB M><;B=' = 0F , ;?A' < ') <EB HB ' 6' ' C> <;' D<;' , U , @' U ;A' ;AB' , ' H<=@' < ' A 0' ; <<F0:' , =' N< B=') B@' , =' B@ B :' , =' ' ;AB ' > ;B=' , @' ;<< ' >F' ,' =B B 0 EB' F<0 ; < ' , ;' , ; , B ' < ' B20BUAB B:' 1 , 00B ,' DA;' 0; 22' A , D' < ' ;<' +< ;>D , 2:' ; 22' <>2;' H <>DA;' >F' ;<' A 0' , =' ;AB' UA<2B' @' < ' =, 2>0 , :' < ' D B , ;' B < ?B B ;0' , EB=' < ' , 0; 2B6' @' ?A , ?B V ,' <D:' AB , E@' , :' ;AB' , 0A B00' < ' 0;>F = ;@' < ' 0< B' 0>H< = , ;B V DA;' F BEB ;' ;AB' ?< F2B;B' , =' 0; , ; , B<>0' 0>??B00' < ' ;AB' , ; ; , ? ' < ' <H , 26' AB0B' ;A D0' HB D' ; , B ' ;<' ?< 0 =B , ; < :' & B22 D;< ' B0<2EB=' ;<' 2 B' 0; 22' ' ;AB' % B0:' , =' ;<' 2B;' ;AB' UB , F< ' < ' 0; , E , ; < ' F2 , @' < ' 0< B' ; B' 2< DB ' < ' ;AB' " B ?A6' B' BWFB?;B=' ;AB ' ;<' B; B' U ;A ' ,' BU' =, @0' < ' 0ABB ' B?B00 ;@:' < ' B20B' ;<' =B2 EB ' ;AB' >?A' =B0 B=' , ; ; , ? ' < ' A 0' F BD , H2B' F<0 ; < 6

1 , 00B ,' A , =' <> =' ;A , ;' ;AB' F BF , , ; < ' < ' A 0' H =DB' BM> FY , DB' , ;' , ; , B ' U<>2=' HB' ,' 2< D' H>0 B006' B' BU' ;A , ;' A 0' > HB 0' UB B' 0A D' BEB @' =, @' ;AB' <0;' , FF , 22 D' , 0A < :' <;' < 2@' < ' =B , ;A0' , =' E , 2 = D:' H>;' < ' =B0B ; < 6' ! B;' AB' 0;<<=' 0; 22' < ' ,' < ; DA;' 2< DB ' ;A , ' A 0' , =EB 0 , @' A , =' BWFB?;B=:' , =' B , UA 2B' , =B' ,' 2 , 0;' =B0FB , ;B' , FFB , 2' < ' AB2F' ;<' ;AB' # FB < 6' ' B' A , =' D>B00B=' ;A , ;' , 22' A 0' F BE <>0' , ;;B F;0' ;<' ?< > ? , ;B' U ;A' F, ' A , =' , 2B=' HB?, >0B' A 0' B00B DB 0' A , =' HBB ' 0B ;' U ;A<>;' ,' 0> ? B ;' B0?< ;:' , =' A , =' , 22B ' H@' ;AB' U , @6' ??< = D2@:' AB' ;<2=' < ' ,' H<=@' < ' < B' ;A , ' ' B ' ;<

S " ! 8 1) + O

HB, A 0 BW;2B;;B :, =D, EB;AB?< , =< ;AB ;<, <?B < UB22 <U ;B22 DB ?B, = B0<> ?B V "<@: UA< A, =0B EB= ,22 ;AB;A BB +< ;>D>B0B?, F, D 0:C> <;80 < :<>2;80 < 5:, =;A 0 2, 0;< A 0 <U 6 1 < B<EB :;U, 0 <U ;A, ;), F<2B< A, =?< =B ?B A 0 , H 2 ;@: ;A<>DA AB U, 0 , <2= BF>H2?, :, =A, = , ?;>, 22@ HBB < B < ;AB BU UA< A, = B >0B= ;< 0 D ;AB, == B00 UA ?A U, 0 = , U >F ;<, 0 ;AB " B; < 0>2 ;< =B?2, B A 0B2 # FB < O6 "<@ U, 0 D EB , UA<2B H, ;;, 2 < < , ; @V ;AB O; A < ;AB O4; A < ;AB % B V U ;A <> ;B= B 6 B U, 0 ;<2= ;<, E< =;AB , <, =0: ;<? <00 ;AB 3BRB B: F, 00 < ;A < (, 0; B22< $, ?<: , =;<; @;< B, ?A F, H@ U, @ < , H>D, 2 < +B , , ?<WT6 A 0 U, 0 <HE <>02@ , = ?>2;; , 0 :0 ?B ;AB =B , , UB B <U ;< HB, H <, =: BEB ;A 0 >DDB= , =B0B ;B= BD < 6 <?<EB " <@80 0;, ;:1 < ;H > , ?AB=: U ;A , H D, =B < = T, D<< 0 , = , ?<>F2B < H, ;;, 2 < 0 < , ; @: ;<, B , =B < 0; , ; < , D, 0; H 8, ;B0: , = = , U ;AB , ;;B ; < < ;0 D, 8 0< W< ;AB >FFB 3BRB B6 1 < ;H > < ?B=;AB F, 00, DB < ;AB EB , ;+> AB; B: , ;B , 0A, F 0 0A: , =B0; , H2 0AB= A 0 E, D>, = < ;AB > ;AB 0 =B6 B ;A>0 , ;; , ?; B= ;< A 0B2 , 22 ;AB < ?B0 UA ?A %<H<: ;AB D<EB < < H , ;B0: ?<WW2= 0F, B <>;0 =B A 0 U, 2206 1B, UA 2B I ?;<HB J " <@ F, 00B= ;AB 3BRB B A DAB >F: , ; , > D>, =B= < =: , = , ?AB= H@ , = D<0 , = <HWTB , " < <0, , 2< D ;AB (, 0; B22< $, ?< <, =6 $>; AB , H, =< B= ; HB < B B, ?A D ;A, ; ;<U :, = ;> B= < ;A: ? <00 D ;AB B , =B 1 < , =, 2 H@ " > =, < , = $B2 < ;B6 "W8< ;AB ?B AB B, ?AB= , H WD, 2: , = , 22@ >=, = <= D< <) <EB HB 6 B A, = HBB > <2B0; B= 0, EB H@ , H<=@ < =B W, , : UA< ?>; < 0< B < A 0 0; , DD2B 06 AB F, 00, DB < A 0 ?<2> : UA<0B 0; B D; A U, 0 BW, DDB , ; B= H@ > <>W: ?, >0B= , 2<0 * 8#0F, 2, ; ;< H> ;AB HW8 =DB< . 22, . ?2A, > =B ;AB F B00 < ;A, ; "<@ ;B =B= ;< 0B RB ; :, = <FB >F ?< > ?, ; < 0<>; AU, = U ;A < W2; 6 B , = %<H< BF< ;B= ;< & B22 D; < ;A, ; "<@, = 1 < ;H > UB B ;AB E, < , D B, ; < ?B: UA ?A U, 0 , H<>; ;< <EB > , = <??>F@ ;AB (, 0; B22< $, ?< ?<> ; @ $>; 1, 00B , 80 B00B DB A, = < <; AB <HNB?; ;A, ; < B, ?A , 0; 2B U ;A , 0 D B, ; , F = ;@ , 0 F<00 H2B: , = U ;A<>; DA; D6

T & B22 D; < , 20<: < %<H<80 BF< ;: ;A<>DA; S1 () ' #%(E 6 P OJ ;A, ; "<@80 , = 1 < ;H > 80 <HNB?; A, = HBB ; < 0B RB ;AB H =DB < . 22, . B2A, 6

O ' 1 #) ' $ # " #' # ' . # * ' X) <E6' O

& 22' ;AB@' HB' <HB@B=' P' ;' ;A , ;' = 0; , ?B' < 2@' ;A<0B' UA<' ?A<<0B'
?, @' <>;' @' = B?; < 06' X ' A ;' , ;' <>2;80' 0B2 0A' F<2 ?@6S'
' ; B H2B' 2B0;' 1 ,00? ,' ,@' ? ,22' * <>B;' =<U ' ;<' A :' , =' ;AB '
DB;' A 0' ?< > ?, ; < 0' ?>;' ,D , 6' $@' ?< > ?, ; < 0' ' B, '
0> B' F< ;0:' , ;' ;U<' < ' ;A BB' , ?AB0' = 0; , ?B:' F <FB 2@' D , 0< B='
, =' F <E 0 < B=:' UAB B' ?< E<@0' ? , ' B0;' , =' HB' 0 , B6' ' , @'
U ;A<>;' <FB ' ?< > ?, ; < 0' 2<0B0' AB , ;' , =' DB;0' =B < ,2 RB=6'
6 6 6 22' ;AB' A<FB' < ' ;AB' # D2 0A' 0' ' ;A , ;' , @' < ' & B22 DY
;< 80' Q ' UB' ?<>2=' =B0; <@' ;:' ;' U<>2=' HB' ,' ;B H2B' H2<U' ;<'
;AB 68

AB' # FB < :' F2B , 0B=' U ;A' "<@80' ;B22 DB ;' BWF2 , , ; < 0'
< ' ;AB' 0 ;> , ; < :' ? B , ;B=' A ' ,' DB B ,2' < ' = E 0 < :' , =' ;<2='
A ' ;<' B0;' < ' ,' < ;A:' , =' ;AB ' B;> ' ;<' +< ;>D , 26' B' 0B ;'
< ' A ' ;<' , = 0;B ' ,' 0B?< =' ?, ;B?A 0 ' < ' ;AB' O;A:' , =' ;AB '
?< =B0?B =B=' ;<' BWF2 , ' A 0' E BU' < ' ;AB' 0 ;> , ; < :' , =' A 0' < =B 0'
< ' ;AB' >;> B6' B' M> ;B' , FF <EB=' < ' 1 , 00B ,80' B0<2EB' ;<'
A<2=' <>;' ' < ;' < ' ;AB' % B0:' , =' A , =' , 2 B , =@' D EB ' * <>B;'
= B?; < 0' ;<' , 00B H2B' A 0' ?< F0' , ;' 2 B = , :' , =' <FB ' >F' ?< Y
> ?, ; < 0' U ;A' ;AB' 8 @' < ' +< ;>D , 2 V ' , ?; :' ;AB' < =B ' ;<' =<'
0<' A , =' HBB ' 0B ;' < ' ,0' B , 2@' ,0') <EB HB ' :' , =' ;0' HB , B ' >0;'
A , EB' ? <00B=' <@' 0< BUAB B' < ' ;AB' <, =' <>2;' A , =' , 20<' HBB '
< =B B=:' ;U<' = , @0' HB < B' 1 , 00 ,80' , FFB , 2' ?, B' ;<' A , =:' ;<'
? B , ;B' ,' = EB 0 < ' ' ;AB' = B?; < ' < ' F, 0A' #0; B , => ,'
B' U , 0' <U' 0B ;' ,' 0A , F' BF << ' < ' A , E D' =< B' <;A D:' , ='
< B' B0FB? , 22@' < ' A , E D' , 22<UB=' % , ' < , ,' ;<' 02 F' , U , @'
U ;A' ;U<' = E 0 < 0' ;<' % 0H< ' > <2B0;B=' $>;' ;' 0BB 0' ??B , '
;A , ;' <' < =B 0' ;<' ?< ?B ; , ;B' A 0' UA<2B' , @' , =' E , =B' ;AB'
2B ;BN<' UB B' 0B ;' A :' , =' ;AB0B' UB B' ;AB' < 2@' B , 0> B0' ;A , ;'
?<>2=' A , EB' AB2FB=' 1 , 00B ,6') , F<2B< 80' = '% ' . ': ' ;A , ;' ;'
U<>2=' HB' <' >0B' ;<' HB0 BDB' , =' ?, F;> B' #2E , 0' 0A<U0' ,' 0Y
, FF BAB 0 < ' < ' ;AB' 0 ;> , ; < 6' ' B B' =B < 0; , ; < ' '
F, 0A' #0; B , => ,' DA;' ?, 22' H , ? ' % , ' < , ,' :' H>;' U<>2=' '
<;' AB2F' ;AB' @' < ' +< ;>D , 2' ;<' , @' , FF B? , H2B' BW;B ;6' ;'
U , 0' <;' % , ' < , ,80' : ' B ' UA<' < B=' ;AB' 0; B D;A

8' A 0' 0' ;AB' < =B ' ' () . ' 4: 546' ;' D<B0' < ' ;<' D EB' * <>B;'
=B; , 2B=' < =B 0' ,0' ;<' UA , ;' AB' 0A<>2=' =<' K' , >00 ;<;' M>B' 2B0' D2 , 0' 0B 8< ;'
B A , M>B068

^ A 0' A , =' HBB ' 0B ;' < ' ;AB' = , @' HB < B' "<@' , EB=:') <E6' :' ;' 0' % '
() . % ' 4: OP6' ^ %() . % ' 4: 4 :' = , ;B=') <E6' 6

BP ' " ' 9 +&$ ' &$$ ') @$ ' R"*/(

8< = B6 %8BW??>;B , ; < ' *B' 0' 2< ' <HB ;' M>' EB>;' $>;'
';A 0' UB B' 0<:' ;' U,0' 0> B2@' B?B00, @' B ;AB ' ;A, ;' AB' 0A<>2=' D<'
;<' F, ' ' FB 0< :' < 'B20BV ;AB' < B' <HE <>0' ,2;B , ; EBV ;A, ;'
AB' 0A<>2=' ,FF< ;' ,' B,2' < , , =B A B ' ';AB' +B 0>2,:'
UA<' 0A<>2=' A,EB' ,>;A< ;@' ;<' < =B ' ,22' ;AB' <;AB ' , 0A,20' , ='
DB B ,20' ;<' <HB@' A 0' = B?; < 0:' U ;A<>;' ,2 DB D' < ',FFB,20'
;<' +, 06') ,F<2B< 'A,=' =B2 HB ,;B2@'? B,;B=' ,'= E =B=' ,>;A< ;@'
HB@< =' ;AB' +@ B BB0' UAB ' AB' 0B;' >F' A 0' 2 ;, @' D<EB B ;0:'
, =' 0; >?;B=' >?AB;:' 9B22B , :' , =' ;AB' <;AB ' D<EB < 0'
;<' BF< ;' = B?;2@' ;<' A 0B2 :' , =' ;<' F,@' <' ,;;B ; < ' ;<' ?< Y
, =0' B , ,; D' < ' 1 ,= = 6' 9 D' C<0BFA:' ,0' ,' ?B ; ,2'
0<> ?B' < ' < =B 0:' A,=' HBB ' B=>?B=' ;<' ,' >22 ;@' H@' ;A 0' 22 '
?< ?B EB=' =B? BB6 #EB ' <EB ' ;AB' ; <<F0' <;' ??>=B=' ' ;AB'
BU' E ?B <@,2; B0' AB' A,=' <' F ,?; ?,2' ,>;A< ;@6) <;' AB' , ='
A 0' ?A B '< ';AB' 0;, :' H>;' 1 ,00B ,:' <>DA;' ;<' A,EB' HBB ' B ; >0;B='
U ;A' ,' >22' , =' ,>;<? ,; ?' F<UB ' < ' ?< , =' <EB ' ,22' ;AB'
, B0' < ' F, :' ',' ; >B' > ;@' < 'F> F<0B' U,0' ;<' HB' ,?A BEB=6
A 0' B?B00, @' , , DB B ;' ;AB' # FB < ' >;;B 2@' B >0B=' ;<'
?, @' <> ;G AB' 0B ;' BH> B0' ;<' * <>B;' < 'AB0 ;, ; D' ;<' <HB@' ;AB'
< =B 0' < ' ;AB' + ?B' < ' #002 D:' , =' AB' NB0;B=' ,;' ;AB' ,H0> ='
?< =>?;' < ') B@' , =' C> <;' ' ?< =>?; D' ;AB 0B2EB0' 2 B' =BY
FB =B ;' DB B ,20 6' $>;' ;AB0B' < ?B 0' UB B' ' ?< , =' < '
; <<F0' =B ;B2@' ,22<;;B=' ;<' ;AB' @' < ' +< ;>D,26' EB ';AB'
<;AB ' DB B ,20' < ' F, ' AB' B >0B=' ;<' ,22<U' 1 ,00B ,' , @'
?< ; <2:' , =' AB' ?< ; >B=' ;<' 0B =' ;AB ' A 0' <U ' BEB ;, =@'
0; >?; < 0:' UA ?A' A,=' < ;B ' ?B,0B=' ;<' HB' ,FF <F ,;B' 2< D'
HB < B' ;AB' = 0F,;?A' A,=' B,?AB=' ;0' =B0; ,; < 6' ' UB' 0BB '
;AB' B,0< 0' < ' ;A 0' > U 0B' FB 0 0;B ?B' ' A 0' <2=' B;A<=0:' UB'
=' ;A, ;' ;AB@' UB B' ;U<6' AB' 0;' U,0' A 0' 0B? B;:' H>;' < 2@' A,2 '
= 0D> 0B=:' ;B ; < ' ; ,' , BW' ,22' ;AB' F, 0A' F <E ?B0' < ;A' < '
;AB' #H <' ;<' " , ?B:' , ' 0, B' B0<2EB' UA ?A' 2B=' A ' ;<' BBF'
>?AB;' , =' 1 ,?=< ,2=' ' ,D< ' , =' ,;,2< ,:' ,0' UB22' ,0'
;AB' D<EB < 0' < ') ,E, B' , =' $ 0?,@:' <>;' < ' ;AB' ?< ; <2' < ' , @'
?B ; ,2' ,>;A< ;@' ;A ,;' AB' DA;' 0B;' >F' ' F, 6' AB' 0B?< ='
U,0' A 0' NB,2<>0@' < 'B ; >0; D' ;AB' E,0;' , @' 0<>;A' < ';AB' #H <:

T' BB' ,H<EB:' F6' O 6
T' BB' FF6' ', =' O' ,H<EB6
^ BB';AB' ,H<EB M><;B='?< EB 0,; < 'U ;A' "<@:' ';AB' 2,;;B 8O' H %' 3 ' %'
F6' 56

OP ' 1 #) ' $ # " #' # ' . # * ' X) <E6'

A<U' '# " U 22' HB6' 6 6 6 22' ;AB' ,??<> ;0' UA ?A' ' B?B EB' < ';AB' = 0; B00B0' < ';AB' B B @' < ' U, ;' < ' F <E 0 < 0' U<>2=' ;B =' ;<' ,' HB2 B ' ;A, ;' ;AB ' , @' ?, <;' B , ' 2< D' ' ;AB' F<0 ; < ' ' UA ?A' ;' 0' F2, ?B=:' , =' ;' 0' ,0;< 0A D' ;A, ;' ;AB@' A, EB' HBB ' ,H2B' ;<' B , ' AB B' 0<' 2< D' ,0' ;A 0' A, ;' ;AB@' A, EB' 0>??BB=B=' ' 0; , @ D' BEB ' ,' < ; DA;' ' < ;' < ' ;2 B' % B0' 0:' AB' ,==0:' B ; B2@' ;AB' ,>2;' < ';AB' +< ;>D>B0B' D<EB B ;:' < ' <;' ?, @ D' <>;' ;A< <>DA2@' ;AB' U< ' < '=BE, 0; , ; < 6' $>;:' < ' ;AB' B, 0< 0' 0; , ;B=' < ' , ' B, 2 B ' F, DB:' & B22 D;< ' U, 0' B0<2EB=' <;' ;<' ; , B' ;AB' < B 0 EB:' BEB ' , D, 0;' ,' <B' UA<0B' , 0' UB B' HBD D' ;<' D <U' ;A 6' " , B' 0A<>2=' =<' ;AB' U< :' , =' < 2 EB0' 0A<>2=' HB' U, 0; B=6

AB B' B , B=' < 2@' < B' =, DB 6' ;' U, 0' N>0;' F<00 H2B' ;A, ;' <>2;:' BEB ' ;A<>DA' 1 , 00B ,' A, =' <;' @B;' 0> B B=' , @' = 0, 0; B ' D B, ;' B <>DA' ;<' , B' ;AB' BE, ?>, ; < ' < ' #, 0; B ' =, 2>0 ,' FB , ; EB:' DA;' 0B =' 1 < ; B ' , =' 0< B' , == ; < ,2' = E 0 < 0' < ' A 0' <;AB ' ?< F0' ;<' F, 0A' #0; B ,=> ,:' , =' , B' ,' =, 0A' , ;' ;AB' %<UB ' , D>06' 1 , 00B ,80' H<, ; H> 2= D' , ;' , ;, B :' < ' UA ?A' BEB @' =B0B ;B ' 0F< B:' DA;' HB' ;B =B=' ;<' D EB' A ' ;AB' , ;B ,20' < ' ,' H =DB' H@' UA ?A' AB' DA;' ?< > ?, ;B' ,? <00' ;AB' %<UB ' , D>0' U ;A' <>2;6' & B22 D;< ' ,??< = D2@' B0<2EB=' ;<' BBF' ,' 0; ?;' U, ;?A' HB@< =' ;AB' , D>0:' , =' ;<' A, EB' ,' 2@ D' < ?B' B, =@:' UA ?A' ?<>2=' A =B ' ;AB' ?< 0; >?; < ' < ' ,' H =DB' < ' ,' H =DB' AB, =6' & ;A' ;A 0' <HNB?;' < ') <EB HB ' ' AB' 0B ;' <EB ' ;AB' , D>0' (B B ,2' " , B:' U ;A' A 0' : ' +< ;>D>B0B' A< 0B:' ,' H, ;; , 2 < ' < ' , , =< B0:' , =' ,' BU' D> 06' 22' ;AB') < ;A' 2B ;BN<' =B , ? ,' UB B' ?, 22B=' <>;' ;<' U, ;?A' ;AB' EB ' H, 0:' , =' ;<' 2B =' UA, ;' 0 , 22' , 00 0; , ?B' ;AB@' ?<>2=' ;<' ;AB' ?, E, 2 @6' " , B' = 0?<EB B=' ;AB' " B ?A' =<? @, =' , ,' , ;, B :' , =' ; B=' ;<' B' ;' U ;A' <? B;0' < ') <EB HB ' 6' B' , 2B=:' H>;' ;AB' B B' , FFB, , ?B' < ' A 0' 2 ; ;2B' < ?B' < ' ;AB' > ;AB ' H, ' < ' ;AB' , D>0' A, =' 0< B' D<<=' B B?;:' 0 ?B' ;' U, B=' 1 , 00B ,' ;A, ;' , ' , ;;B F;' ;<' F, 00' ;AB' H <, =' EB ' U<>2=' <;' HB' <FF<0B=:' , =' ;AB B < B' , =B' A ' < B' ?A, @' < ' , ;;B F; D' ;6' " , B:' HB D' ' ;<>?A' U ;A' H , ;B0' < ' A 0' DA;' A, =' , =' U ;A' % 0H< ' < ' A 0' 2B ;:' <U' < B=:' ,0' ;' UB B:' ,' 0B?; < ' < ' ;AB' H2<? , = D' 0? BB ' UA ?A' U, 0' ;A <U ' <> =' ;AB' UA<2B' " B ?A' , @6

& B22 D;< ' A, =' 0?, 2?>2, ;B=' ;AB' ; B' UA ?A' ;AB' " B ?A' ?<>2=' ' & B22 D;< ' ;<' % EB F<<2:' ?;<HB ' 4:' FF6' PO ' , =' P ' < ' E<26' E 6

S 1 #) 8 " # # OP

< B ; U ; A , B < <>0 F <H , H 2 ; @ < 2 ?; D < ; AB B B @ <; ; AB B B BF>20B ; A , ; AB = 02 B= ; <? ; B F2 , ; B V < , ??<> ; < ; 0 >2; B < B B?; 0 V H>; , ? >0A D =B B , ; UA ?A DA; A , EB A> 2B= ; AB <>; < +< ; >D , 26

) <EB HB 1 , 00B , < =B B= ; AB A<0F ; , 20 < ; AB P ; A , = ; A < F0 , ; 2B M>B : , = < ; AB = < F0 , ; R , H>N , : ; < HB 0B ; < ; < , ; , B 6 ; ; AB 0 , B ; B ; AB ; B =, ; 0 < ; AB ?< 00 , , ; UB B < =B B= ; < = B?; ; < ; AB B , ; AB B , D B 0; < B < F <E 0 < 0 UA ?A U , 0 ; AB F<00B00 < : 2< , =B= < ; AB >?A =BF ?; B= ; , 0F< ; ; , UA ?A 0; 22 0> E EB=6 ; AB ; A ; AB B0B EB F , 0 , = ; AB , ; 22B @ ; , < B , ?A ?< F0 UB B < =B B= ; < <22<U6 ; AB O ; A: , ; B DA; <8??<? ; AB BEB D: ; AB , ; @: , @ < UA< 2 , @ ?< ; , ?; U ; A ; AB $; 0A 2 B0: , ?; B= < ; AB , ?A D = B?; < 06) B@8 0 , H<=@: UA ?A U , 0 <>; < 0 DA; < & B22 D; < : U , 0 ; < <EB 0; 7 ; AB C> <; , = "B B@8 0 H D , =B: UA<0B <EB B ; U , 0 <0; FB 2<>0 V < ; AB =BF , ;> B UB B = 0?<EB B= UA 2B ; AB@ UB B < ; AB A ; AB 0 =B < ; AB =B 2B < 2B M>B : ; AB@ , , , D B , ; 0 < HB D B EB2<FB= , = =B0; <@B=6 B@ B U , 0 ; < , ; , A 0 F<0 ; < , ; . 22 , ? , , = , BD , =<: > ; 2 ; U , 0 BF< ; B= ; < A ; A , ; C> <; , = A 0 ?< F0 A , = F , 00B= 2B M>B , = B , ?AB= 1 < A< =B >H<6 " < ; AB = < F0 A , = D< B < , ; , B , 2@ A<> : , = ; 0 =BF , ;> B A , = HBB = 0?<EB B=6 22 DA; A , EB , ?AB= < 2A , = , < 2B M>B M> ? 2@ B <>DA ; < ;B ?BF; C> <; , ; ; A , ; F< ; 7 , = C> <; UB B HB D F> 0>B= , ; ; AB < B ; H@ ; AB ; <<F0 < A 0 B= , ; B < : ; AB UA<2B ; A < F0 DA; A , EB HBB ?>; < 6

; AB DA; < ; AB O ; A: UAB ; AB <EB B ; U , 0 ?< B ? D: 1 , 00e , U , 0 , E<> B= U ; A ; AB D B , ; B0; F B?B < 2>? UA ?A A , = ?< B ; < A 0 ?B ; AB BWF2<0 < < 2 B = , 6 <D HBD , ; < 0B ; AB 0 , 22 A<> 0: , = A , = HB?< B =B 0B H@ ; AB B , 2@ < D6 ; ?, >0B= 0< B = ?>2; @ ; < ; AB B; D ; <<F0: , = = , D<< 0 A , = ; < HB F2 , ?B= , ; BEB @ ? <00 <, = ; < F< ; <>; ; AB DA; = B?; < ; < ; AB , ; @ ?<2> 0 $>; ; A , = ; AB , 22 F< ; , ; B0>2; < FB ; ; D ; AB $; 0A <>; F<0; 0 ; < 0BB <; A D , ; = , U 6 AB 2 ; E 0 H2B ; < ; AB U , 0 2B00 ; A , @ , =06 ; U , 0 < 2@ , ; ; B <8??<? ; AB < D < ; AB ; A ; A , ; ; AB 0; 0 UB B 0>==B 2@ <22B= >F H@ , B , 0; U =: , = ; A , ; ; AB * B2 , D , EB: F6 , = <; B:

2 : : ' 3 ' ' H (; '' ' ' (7 & 3 ' A (' 6

B , B ' <> ; F <0 ; 0 ' ? <> 2 = ' 0 BB ' ; A , ; ' ; AB ' " B ?A ' 0 B ; B20 ' < ; ' < ' ; AB ' A , = ' = 0 , FFB , B = 6 AB ' 0 ; ' , 2 , ' U , 0 ' D EB ' H @ ' , FHB228 0 ' P ; A ' * E 0 < ' AB ' BU0 ' 0F B , = ' , 2 < D ' ; AB ' UA <2B ' 2 B ' < ' UB0 ; ' ; < ' B , 0 ; : ' , = ' B , ?AB = ' ; AB ' < , = B A B : ' UA < ' , 0 ?B = B = ' ; AB ' A 22 ' ' < ; ' < ' <H , 2 ' , ' BU ' >; B0 ' 2 , ; B ' AB ' DB > ; @ ' < ' ; AB ' B B @ ' ?< ?B , 2 D ' A 0 ' = BF , ; > B ' A , = ' HBB ' D 8B , ; 6 " B B@8 0 ' H D , = B : ' ' < ; ' < ' >= , : ' A , = ' B B ?; B = ' , ' UB22 = B0 D B = ' 2 B ' < ' => @ ' 0B ; B20 ' HB < B ' ; AB ' % DA ; ' * E 0 < : ' UA ?A ' UB B ' <; ' = 0 ?<EB B = ' ; < ' HB ' B ' < ' 0 ; , U : ' ; <FFB = ' U ; A ' <2 = ' 0A , <0 ' , = ' H <> = ' ; < ' F <2B0 : ' ; 22 ' ; AB ' <D ' <22B = ' < ; < ' ; AB ' ; A

1 B , UA 2B ' ; AB ' " B ?A ' A , = ' , ?? < F2 0AB = ' ; AB ' 0 ; ' 0 ; , DB ' < ' ; AB ' B ; B , ; ' , H0 <2> ; B2@ ' > <2B0 ; B = 6) B@ ' A , = ' B ; B , ; B = ' , 0 ' , ' , 0 ' 2 ?<B ; B7 ' C> <; ' A , = ' F , 00B = ' ; AB ' = B 2B ' < ' 2B M>B : ' , = ' F , 00B = ' ; A <> DA ' 1 < A < ' = B ' >H < ' ; < ' EB , ' = B ' , 6 B@ B : ' UA < ' A , = ' U , ; B = ' ; 22 ' C> <; ' U , 0 ' ' 0 , B ; @ ' HB < B ' AB ' U ; A = BU ' , ; ' B DA ; ' ' ; AB ' < D : ' B , ?AB = ' , ; , W < ' HB < B ' ; AB ' = , @ ' B = B = 6 AB ' 0 ; ' , = ' <0 ; ' = ?>2 ; ' 0 ; , DB ' < ' ; AB ' B ; B , ; ' A , = ' HBB ' 0AB = ' U ; A <> ; ' , ' 0A <; ' HB D ' B = 6 & A , ; ' U <>2 = ' A , EB ' A , FFB B = ' A , = ' ; AB ' DA ; ' < ' ; AB ' O ; A ' HBB ' ??B , ' , = ' 0 ; , @ : ' , = ' ; AB ' < D ' 0> ' A , = ' 0A < B ' <> ; ' < ' ; AB ' ; A : ' 0 < ' ; A , ; ' C> <; ' U <>2 = ' A , EB ' HBB ' =B ; B ?; B = ' , 0 ' AB ' U , 0 ' F , 00 D ' 2B M>B : ' , = ' B@ B ' U <>2 = ' A , EB ' HBB ' E 0 H2B ' 0 ; 22 ' ' 2 B ' < ' H , ; ; 2B ' HBA = ' . 22 , , ? , : ' ; AB ' " B ?A ' = , 0 ; 0 ' < ' ; AB ' ? , F , D ' F B B ' <; ' ; < ' ?< ; B F2 , ; B6 ! B ; ' ; AB@ ' <0 ; 2@ ' ?< ; >B = ' ; < ' 0FB , ' < ' & B22 D ; < ' , 0 ' , ' B = <? B ' DB B , 2 : ' UA < ' A , = ' , 22 ' ; AB ' 2>? ' <A ' A 0 ' 0 = B6

' ; AB ' DA ; ' < ' ; AB ' ; A ' ; AB ' $; 0A ' < , = B A B ' A , = ' ; < ' = , U ' A 0 ' = B = >?; < 0 ' < ' ; AB ' , ?; 0 ' HB < B ' A 6 A BB ' ; A D0 ' UB B ' F <00 H2B ' 6 1 , 00B , ' DA ; ' A , EB ' HBB ' 0 < ' ; A < <> DA2@ ' 0 ; , EB = ' <>; ' , = ' H < B ' ' 0F ; : ' ; A , ; ' AB ' DA ; ' HB ' ; B = D ' ; < ' B ; B ' < ' F , : ' B ; AB ' E , ' A < , ' , = ' ; AB ' 1 < =BD <: ' < ' H@ ' A 0 ' BU ' H =DB ' < ' ; AB ' 3BRB B ' , = ' ; AB ' <>; B ' < ' (, 0 ; B22 < ' $, ?<6 ' AB ' DA ; ' HB ' F <F <0 D ' ; < ' ? <00 ' ; AB ' , D>0 ' H@ ' B , 0 ' < ' ; AB ' H <, ; 0 ' , = ' F < ; << 0 ' 0 ; 22 ' B , D ' , ; ' , ; , B : ' ; < ' 0BB ' > U , 0 ; B = ' B2 = 0 ' ' ; AB ' 2B ; BN < ' , = ' , ' N > ?; < ' U ; A ' 1 < ; B 6 : ' , D , : ' AB ' DA ; ' B B2@ ' HB ' , H , =< D ' , ' F <0 ; < ' ; A , ; ' U , 0 ' < ' 2 < DB ' ; B , H2B : ' ' < =B ' ; < ' ; , B ' >F ' , ' BU ' < B V FB A , F0 ' , ; ' , ; , B : ' FB A , F0 ' , ;

8 ' %< =< =B @ : ' 6 FF6 6

^ 0 ' 0 ; ' = 0F , ; ?A : ' ; A , ; ' ; < ' , > > =: ' 0 ' = , ; B = ' , ; ' 6 6

^ BB ' %B , ?A8 0 ' 1 ; ' F ' 4 6

OP ' 1 2 2) 8 ' # # ' ') # 1 ' X) <E6 4
= B?;B=' ;<' , ?A' ;A , ;' , ;B << 6' AB' < B :' U ;A' ,' ?, E, 2 @'
BD B ;' <>;' ' A 0' < ;:' <??>F B=' <H , 2:' , =' F>0AB=' ;0' E, Y
D>, =' < U, =' ;<' 2B M>B ' H@' ;AB' A DA' <, =6' 2 B' 0B?< =' 2B ;'
>=, :' ?2 HB=' ;AB' 2<U' A 220' ' < ;' < ' A :' UAB B' "B B@' A, ='
HBB ' B ?, FB=' < ';AB' 2, 0;' < ;A:' , =' B2;' A 0' U, @' ;<' 2B M>B :'
H@' ;AB' H, =' <, =' UA ?A' A 0' B= , ;B' , =EB 0, @' A, =' ;, B '
B DA;BB ' A<> 0' HB < B6' 22' <22<UB=' ;AB' D 8B, ;' ' , 2< D'
;AB' , D>0' H, :' H@' . 22, , ?, ' , =' , 0;, AB , :' , =' B, ?AB='
, BD, =<' HB < B' =, 6' B' U, 0' U, B=' ;<' HB' ' B, = B00' ;<'
? <00' ;AB' EB :' H@' B, 0' < ' = , 2' $B B2B@80' H<, ;0:' , ;' ;AB'
B, 2 B0;' F<00 H2B' < B ;:' ' ?, 0B' ;AB' " B ?A' 0A<>2=' A, EB' H> 2;'
,' H =DB' , ;' , ;, B ' ;<' B , H2B' ;AB ' ;<' ? <00' ;<' ;AB' 2B ;BN<6 '
AB' , =E, ? D' ; <<F0' <> =' ;AB' " B ?A' ?, F0:' , =' ;AB' E 22, DB0'
UAB B' ;AB' < B' < ;> , ;B' H, ;;, 2 < 0' A, =' HBB ' M>, ;B B=' > =B '
?<EB :' ' ;AB' <0;' = B, = >2' ?< = ; < 6' K' AB' 2B M>B ' <, ='
U, 0' ?<EB B=' U ;A' A< 0B0:' >2B0:' , =', 00B0' UA ?A' A, =' FB 0AB=' < '
U, ;' < ' < , DB6' & B' F, 00B=' , @' " B ?A' 0<2= B 0' 2@ D' =B, =' H@'
;AB' <, = 0 =B:' UA<0B' , FFB, , ?B' = ?, ;B=' ;A, ;' = 0B, 0B' , =' U, ;'
< ' <<=' A, =' ?, B=' ;AB ' < 6' #EB @' A<>0B' ' BEB @' ;<U ' < '
E 22, DB' U, 0' ;A< <>DA2@' , 0, ? B=68' ' K' 2B M>B ' A, =' HBB ' B ; B2@'
0, ? B=:' ;AB' U =<U0' , =' =<< 0' ;< ' =<U ' , =' H> ;:' , 0' UB22' , 0'
<0;' < ' ;AB' > ;> B7' ?A , :' F B D2, 00B0:' , =' ?A, =B2 B 0' , 22'
=, 0AB=' ;<' F B?B0' U ;A' ;AB' <HNB?;2B00' > @' < ' 0, E, DB06' AB@' A, ='
2B ;' , @' 0B , H2B' B22<U0' HBA =:' UA<' UB B' ;<<' 22' ;<' , ?A6'
;AB0B' UB B:' < ' ?<> 0B:' F>;' ;<' =B, ;A' H@' ;AB' +< ;>D>B0B' UAB BEB '
UB' A, FFB B=' ;<' 00' = D' ;AB ' <>;6' & B' <> =' 0BEB , 2'
FB, 0, ;0' UA< ' ;AB' " B ?A' A, =' > =B B=' , =' 2B ;' >F< ' ;AB'
<, =:' , =' , 20<' 0BEB , 2' " B ?A' 22B=' H@' ;AB' +< ;>D>B0B6' ;' U, 0'
, ' = B, = >2' 0 DA;' ;<' 0BB' 0<' , @' B' ;<U 0' , =' E 22, DB0' 0, ? B=:'
, =' U ;A<>;' , ' ? B, ;> B' ' ;AB 68'

' ;AB' ;A' < B' < ' ;AB' B B @' A, =' HBB ' 0BB ' 0, EB' ;AB' =B, ='
, =' ;AB' , H, =< B=' 0 ? 6' AB' ; , ?B0' < ' ;AB ' B; B, ;:' A<UBEB :'
0A<UB=' ;A, ;' , 22' A, =' D< B' < ' H@' ;AB' <, =0' ;<U, =0' , ;, B 6'
' ;AB' P;A' & B22 D;< ' <EB=' < B' ; <<F0' <>;' < ' ;AB' % B0:' ;<'
0>FF< ;' 22:' , > > =:' , =' FB ?B :' ' ;AB' BEB ;' < ' ;AB' B B @

K' 22' < ' ;AB' < =B 0' 00>B=' , ;' 6' ' ;AB' < D' !' < ' ;AB' A 22' '
< ;' < ' <H , 2' 1 () ' #%(' E 6' P 6
T' %B, ?A80' ? : 3' F6' 45'
^ (B< DB' < 080' ? : 3' FF6' 6

= = L & # %%) ( ) . # 9 # # " #) OP5

02 <U D DA;: 2,=B8 A< 0? <22<UB= FB ?B : +,? 8 +< ;>D>B0B <22<UB= ,> > = 7 + ?;< : %B ;A: <2B:, = , FHB22 UB B 2B ; ;AB % B0: UA ?A & B22 D;< 0; 22 = 02 B= ;< 2B,EB UA<22@ > D>, =B= UA 2B AB U,0 <;@B;? B ;, < ;AB >2; ,;B ;B Y ; < 0 < ;AB " B ?A6 AB ,=E, ?B= D>, = F ? B= >F ,H<>; F 0< B 0 ;A 0 =,@ V F, ;2@ , ,>=B 0: F, ;2@ =BH 2 ;,;B= B UA< ?<>2= <; BBF >F U ;A ;AB BD B ;0 => D ,0B?< = 0;,DB < A, = , ?A D6) BW;= ,@ I) <EB HB 4J ; U,0 BE =B ; ;A,;;AB B B @ U,0 HB D <EB ; , B 7 0< 8 ?,E,2 @ H D,=B: UA ?A A,= B,?AB= ;AB < ; < ;AB F B?B= D DA;: ?>; >F , > HB < 0 ,22 F, ; B0 < ;AB " B ?A B, D>, = V ;AB (;2 % DA; * ,D<< 0 ,2< B ?,F;> B= ;U< < 2 ?B 0 , = 4 B : <; 0; ,DD2B 0: H>; HB2,;B= F ? B;0 , = ?< E<@ D>, =06 B < ;AB BWF2< ;0 U,0 2< D B B HB B= V B DB, ; $,W;B : U ;A EB B < 2@: ?, B < , , ; @ <>;F<0; < B : UA< A,= 0;,? B= ;AB , 0 , = UB B ?<< D6 $> 0; D > F< ;AB : AB ?,F;> B= , < ?B , = O B : ;A<>DA 0< B < ;AB " B ?A B A,= D<; ;< ;AB >0 B;0 , = U<> =B= < B < A 0 ; <<FB 06

;AB , ;B << < < ;AB 4;A ;AB B B @8 0 B, D>, = U,0 , ; 2,0; = 0?<EB B=: = ,U >F < , AB,;A <>;0 =B ;AB E 22,DB < , ;,W<6 ;?< 0 0;B= < < B < B@ B 8 0 = E 0 < 0: UA ?A ,> > = U,0 F BF, D;<,;;,? : UAB ;AB < , =B A B ?, B >F: , = B >0B= A 2B,EB ;< HBD ;AB ?< H,;: HB?,>0B B ;AB 22 < FB ?B U,0 U ;A 0>FF< ; D = 0;, ?B < A 6 F < 0 = B B= ,0 ;< UAB;AB , , ;;,? U<>2= A,EB 2B= ;< , BF>20B H@ 0>FB < > HB 0: < ;< ;AB ?,F;> B < ;AB " B ?A = E 0 < : UA ?A A,= , H =DB , = , 2< D ?,>0BU,@ V , <0; =, DB <>0 =B 2B V ;0 B, T 6 + <H,H2@ ,> > = U,0 <; M> ;B 0> ? B ;0; B D;A ;< HB ?B ;, < 0>??B00G AB A,= H>;0 W 0; < D H,;;,2 < 0 , H,;;B @: , = ;AB P;A % DA; * ,D<< 0

4 +* 2 . -0 6 * * , - .* 50 * , - I , * , 0 .21 0- * 0* 66(P>G I &(

4 #-2 , , 0 , 2 "26 - < (B=? ,2 - 5 * 2 -. 0- 1 - 0 5 % 2 . -2/- * 2 2 <6(= ?(* 0* 2 * ,- -1-G -00 , 0 ,2 2 *66* 1 20 00- . <66(P P=?(

^ ,E D <U B?B EB= ;AB $ > 0U ? B20 C DB 0: ;AB % DA; * E 0 < U,0 0 W H,;;,2 < 0 0; < D: <; ;0 >0>,2 EB6 ;0 0; B D;A ,H<>; ;A 0 ; B U,0 0< B O: H,@< B;06 1 B 2B8 = E 0 < U,0 ,H<>; P: 0; < D6 ; A,= =U =2B= ;< O: B B?; EB0 HB < B * B?B HB U,0 <>;6 A>0 ;AB # D2 0A , = ,?,=< B H,;;,2 < 0 ,EB ,DB= (B : ;AB " B ?A O < 2@:

S ' " ' * $ # " #) # 1 04

+> 2 B;?: ,0 ; <D EB A , M> ? B ?A, ?B < , F,00 D ;A, ; EB 6 ?< 0BM>B ?B < ;A 0 BU0: . B22 D;< = B?;B= 22 ;< ? <00 ;AB , D>0 , ; . ,22, = , U ;A A 0 <U = E 0 < : , 2;< 80 +< ;>D>B0B: , = ;AB ;A % DA; * ,D<< 0: < =B ; <0; B D;AB H , ;B0 ; UB B ,00, 2B=: < ; < ,22 < ;AB 2, < ;AB " B ?A: ;AB@ UB B B B2@ F,00 D ;A, ; < ; B00 < ;AB B; B, ; ; < F, 6 A>0 AB =BF EB= A 0B2 < O: B < ;AB DA; H, < ;AB ,D>0: UAB B ,2< B ; <<F0 UB B B,22@ BB=B=6 < , B >F < 228 ,H0B ?B: %B ;A8 , = <2B8 = E 0 < 0 UB B ?,22B= <>; < ;AB % B0: UAB B ;AB@ A, = B0;B= ; 22 ;A 0 < B ; I ;A) <EB HB J 6 $>; ;AB@ UB B ;U< , ?AB0 < : , = & B22 D;< A, = < ;AB < B ; A 0 < ; 2 B <2@ , > > =: FB ?B : + , ? 8 +< ;>D>B0B: , = 2, =B8 , = 0< 8 ?, E, 2 @: , < ?B < 0< B P: B 6 B@ B U, 0 A 0 B= , ; B < ; , ; , ; , B : U ;A : B < , 22 , 06 C> <;8 ?< F0 , ; 2?, AB=B , = +B B0 U, 0 ; UB2EB 2B0 , U, @: , =, H<>; : 0; < D6 ;AB D B, ;B F, ; < A 0 B ?<>2= A, EB HBB H <>DA; >F A, 2 , = , @8 , ?A6) B@ U, 0 ; << = 0; , ; ; < ?< B >F 2B00 ;A, O A<> 0: , = ;AB < 2@ U ;A A, 2 A 0 ?< F0: , 0 %< 0< , = < B < 1 , ?A, =8 H D, =B0 UB B , , U, @6 $>; & B22 D;< A, = , ; ; , ? B= , ; , B < ; AB 5;A ;AB * > B < #2?A DB U<>2= A, EB , FFB, B= BW; < D6 , > > = U, 0 , 0 0; < D2@ ?< E ?B= , 0 A 0 ?A B ; A, ; ;AB B U, 0 <;A D < ; < < A H>; , B, D>, = < ;AB DA; < ;AB ;A: , = AB BEB =<>H; B= UAB;AB ; AB 2, 0; < ;AB " B ?A U<>2= <; U ;A= , U , ; = DA; ; U, 0 ;A 0 ;A, ; =>?B= A ; < , B ;AB ?> <>0 FB 0< , 2 BWF2< , ; < B ; < B= A@) , F B I 6 P J UAB : <22<UB= H@ , 0 D2B 0B DB, ; < 2@: AB F>0AB=

$#% 1 ; '#% #%('#% ? '# 1 2 (H@ ;0 00 0; , ; `>, ;B 1, 0; B : A, 2B0 . B B: 0B; ;2B0 ;AB =, ; B6 "< %B ;A8 0; , ; < ;AB 0, B < D: 0BB %B ;A , @8 K ' 2% 6 F6 P 6

), F B : 2 <EEBEB : =, ; B0 ;AB (B B 28 B0? , F, = B U < D2@6 ; ;<< F2, ?B < ;AB DA; < ;AB ;A 5;A: UAB B ; 0 =>2@ B2, ; B= ;AB = , @ < (B< DB < 0 IF6 4J: , = <; < ;AB 0; , 0), F B F2 B06 A, EB , ?<F@ < * B2, D , EB8) 5 % .% R ': 5 3 UA ?A < ?B HB2< DB= ; <), F B 7 AB A, 0 U ; ; B , 0, ?, 0; ? <; B < ;AB H<; < < F, DB : ?< B ; D < ;AB = ?>2<>0 , ??<> ; < ;AB BEB ; UA ?A , FFB, B= ;AB " B ?A , , ; EB06 B , ==0 ;A, ; ;AB 0B DB, ;8 , B U, 0 1? > @: , = ;A, ; ;AB 0B DB, ; A, = 0B 0B B <>DA ; < A<2= A 0 ; < D>B: H>; , > > = 0F< B <>; : , = 0< = BU ;AB B < ;AB B B @8 F ? B;68

1 , @< :' , =' 0 0AB=' U ;A' ;AB' " B ?A' <>;F<0;0:' UA<' B >0B=' ;<' B; B' < ' ;AB' > ;AB ' 0 =B6' FB ?B ' ?, B' >F' < B' ;<' ;AB' 2B ;:' , =' > ;AB ' 2, =:' +, ? 8O' +< ;>D>B0B' B, ?AB=' ;AB' >FFB ' ?<> 0B' < ' ;AB' <' 1 , @< 6') B ;AB ' %B ;A' < ' <2B' A, =' @B;' , EB=' , ;' ;AB' < ;:' 0<' ;A, ;' ;AB' < ?B' , E, 2, H2B' < ' , ' , ; ; , ? ' U, O' <' < B' ;A, ' P: ' B 6') BEB ;AB2B00:' & B22 D;< :' 0; 22' A<F D' ;A, ;' AB' A, =' < 2@' ,' B, D>, =' ' < ;' < ' A :' , =B' = 0F<0 ; < 0' < ' ,' =B < 0; , ; < ' , D, 0;' ;AB' B B @8O' < ;:' UA ?A' U, O' ;<' HB' ;> B=' ;<' ,' B, 2' , ; ; , ? ' ' AB' 0A<UB=' U, ;' < ' 0; B D;A6' , > > =' U, 0 = B?;B=' ;<' , =E, ?B' , ? <00' ;AB' 0U, F' B, ' ;AB' , D>0:' ' AB' <> =' ;' F , ?; ?, H2B6' +, ? ' U, O' ;<' ? <00' ;AB' >FFB ' <' 1 , @< :' , =' ;> ' ;AB' A<0; 2B' DA;6' FB ?B ' U, O' < B=' , ;' ;AB' B ; , ?B' < ' ;AB' H =DB' , =' ?, >0BU, @:' , =' < =B B=' ;<' ?A, DB' >F' ;AB' # ((#' , ;' ;AB' " B ?A' ?B ; B:' , =' ;AB' H, ; ;B @' ?< , = D' ;AB' <, =:' 0<' 0<< ' , O' AB' 0A<>2=' 0BB' ;A, ;' ;AB' 2, D' = E 0 < 0' UB B' , D' D<<=' F <D B00O6' "< ;> , ;B2@' < ' & B22 D;< ' ;AB' , ; ; , ? ' U, O' BEB ' =B2 EB B=6' < B' , ' => D' ;AB' DA;' A, =' , =B' ;AB' , 0A' 0<' U, ;B 2<DDB=' ;A, ;' , > > =:' UA<' A, =' ? <00B=' ;AB' <' 1 , @< ' H@' ,' , <U' U<<=B ' H =DB' B, ' . , 22B:' ?, B' ;<' ,' 0; , =' ' ;AB' 02>0A:' ;A<>DA' ,' B\E' < ' A 0' 0 0AB 0' F>0AB=' , ' B <>DA' < U, =' ;<' B D, DB' ;AB' B B @8O' F ? B;0' < ' ;AB' <;AB ' 0 =B6' +, ? 8O' +< ;>D>B0B' < ' ;AB' 2B ;' =, ' D<;' , ? <00' ;AB' EB ' U ;A' >?A' = ?>2;@:' H>;' ;AB ' D> 0' UB B' , H0<2>;B2@' 0;>? ' ' ;AB' >=' , ' ;<' ;AB' B, :' , =' ;AB' H D, = B ' 0B ;' H, ? ' U< =' ;<' & B22 D;< ' ;A, ;' AB' 0A<>2=' , =E, ?B' <' > ;AB ' U ;A<>;' 0FB? , 2' < =B 8O6' AB' 0;' * E 0 < ' A, =' <;' @B;' HBD> ' ;<' <EB6' AB B>F< ' ;AB' < , =B A B ' ?, 22B=' H, ? ' H<;A' 8, > > =' , =' +, ? :' , =' D, EB' >F' A 0' F2, 6' ;' 0' ?2B, ' ;A, ;' AB' A, =' <> 0AB=' 0< B' ;B ; < ' < ' , ; ; , ? D' ' B, B0;:' < ' AB' U <;B' ;<' 22' ;A, ;' , ;B << ' 7 K' ' = =' <;' , ; ; , ? ' , ; , B ' ;A 0' < D:' , O' ;AB' , ; 22B @' < ' ;AB' 2B ;' U D' I+, ? J' A, =' 2<0;' ;0' U, @:' , =' ' , ' , ;AB ' D2, =' ;A, ;' ' = =' <;' , ; ; , ? :' , O' ;AB' B B @' A, EB' ;AB B' > =<>H;B=2@' , ' EB @' 0; < D' F<0;:' , =' UB' >0;' B =B, E<> ' ;<' ;> ' ;6' =' ' ;AB@' X;AB' , ' H<=@S' A, EB' <;' B; B=' , ? <00' ;AB' 3BRB B' < ' ;<U, =0' ;AB' 2E, :' ;AB@' >0;' HB' ;<< 0; < D' < ' >0' AB B68

;' 0' <HE <>0' ;A, ;' H<;A' & B22 D;< 8O' , =' 1 , 00B , 8O' 0; , ; BD@' < ' ;AB' ;A' , =' 5;A') <EB HB ' 0' BWF<0B=' ;<' ? ; ? 0 6' & A@' 2 , =' ;AB' $; 0A' (B B , 2' < 2@' P: ' B ' ;<' ;AB' < ;' < ' ;AB0B

04O 1 #) 8 # #) # 1 X) <E6 5 =,@0: U2 B AB U,0 0 D ,DB B ,2 ,?; < U ;A ;AB " B ?A Z B < ;U< ?<> 0B0 >0;A,EB HBB ,=<F;B= H@ ;AB B B @6 B ;AB AB >0;HB , ?A D A, = < ;AB 3BRB B:, = ;B = D ;< B; B ;< F, : < AB >0;HB B B2@?A, D D A 0 D <> =:, = F <F<0 D ;< DA;, ; , ;, B : < < ;< < H , ;B0: < B20BUAB B6 B ;AB ?,0B ;U,0 0; , DB ;,?; ?0 < & B22 D;< ;< ;, B ;AB B2= U ;A P: B I=B=>?; D 22 < ;AB <;AB 0 =B < ;AB ,D>0J: UA 2B AB 2B ;%B ;A , = <2B ;U< < ;A BB , ?AB0 HBA =:, = 0; 22 BF;;AB = E 0 < 0 < + ?;< : , FHB22: , = %B < : , = ;AB > , ; ; , ?AB= +< ;>D>B0B H D, =B < <2B , , = 2BW6 , FHB22 V : B V > <EB= U ;A ;AB % BO6 "< ;AB B B @ U,0 2@ D: ;AB B U,0 < BB= ;< 2B,EB 0>?A , < ?B < BD>2, 0 ;< D>, = F<0 ; < 0 UA ?A ;AB " B ?A ?<>2= <; HB ;B = D ;< , ; ; , ? 6 & A 2B ;AB <;AB A@F<;AB0 0 U,0 ?< B?;: , = 1 ,00B ,: U ;A , , @ UA ?A & B22 D;< 0; 22 B? < B= , ; : B : U,0 ,DA; D <<=: , = B, =@ ;< D EB H, ; ;2B AB 0, U , ,=E, ; , DB<>0 <FF< ;> ;@: ; U,0 0; 22 < 8B BW?>0, H2B ;< 2B,EB HBA = : B : UA< U<>2= HB U, ;B= < ;AB =B? 0 EB 0; >DD2B6 ;AB <;AB A, =: ;AB " B ?A 1 , 0A,2 U,0 ; , D ,;B H2B 0 , 20<6 >FF<0 D & B22 D;< A, = HBB 2B, = D A 0 UA<2B < ?B V =B=>?; D 22 V < ,B0<2>;B , ; ; , ? < ;AB , ; , B F<0 ; < 0: UA ?A U,0 ;AB <0;F <H, H2B ?<> 0B < A ;< , =<F;: AB DA; A, EB A, = <; < 2@ ;AB P: B ;A, ; AB A, = , ?; >, 22@ H <>DA; < U, =: H>; %B ;A , = <2B U ;A : < B: , = + ?;< , = ;AB <;AB : B 2B ; ;AB % BO: , < ?B: ;AB ?, E, 2 @ HB ;A <U : 0, H B0 , = H, @< B;06 & B22 D;< A, = 2B ; , > > = , = + , ? ;< H2<? ;AB , 0A@ 0<>;AB BW ; < , ; , B : UA ?A U,0 , 0 = ?>2; < B@ B , 0 < A 0 , =EB 0, B0: AB DA; A, EB ;A <U O : B ;< ;AB B F;@ 0F, ?B < ;UB2EB 2B0 HB;UBB B@ B , = C> <; : A, EB = EB , U, @ ;AB 2, ; ;B 8 : B : , = 0> <> =B= B@ B 80 : , ; , B 6) B@ ?<>2= <; A, EB D<; >F ; B ;< F BEB ; ;A 06 AB = < F0 U<>2= B ;AB A, EB A, = ;< 0> B =B : < ; A, = A, =2@ , @ <<=: < ;< ?>; ; 0 U, @ <>; U ;A = 0, 0; <>0 2<00B0

AB B F2, ?B B ; < ;AB D2< +< ;>D>B0B , 8 @ 0 D EB ,0 <22<U0 H@ $B B0 < =8 `>, ;B 1, 0; B (B B, 2: * 8 ' H, : < ;AB DA; < ;AB ;A 5;A: 0A<U D ;0 ?< F2B;B = 02<?, ; < G V

2?@ > 0,U ;A 0 FB B?;2@: , U,0 , ,D< @ < = < ;AB ;A , = 5;A6 B U <;B > DB ; ,FFB,20 ;< 1 ,00B , < FB 00 < ;< ,H, =< , ;, B < ;AB < B =,@: F< ; D <>;;2 , ;' A 0 < ;U,0 F ,?; ?,22@ ,??B00 H2B: HB?, >0B < ;AB 0U, F0: A 0 DA; DA; HB ;> B= H@ ;AB >FFB < 1 ,@< : UAB B AB A, =< 2@ , 0 D2B BD B ; <H0B E, ; < :;< ,?B UA, ; DA; HB , <EB UAB2 D 0; B D;A < $; 0A ; <<F0: UA< DA; HB F BF, D ;< ?>; HB;UBB A , =C> <;6 B 0B ; ,22 A 0 ; , : 0 ? : , = U<> =B= ;< (<2BD < , = HB0<>DA; 2B, EB ;< <22<U ;AB 6 & AB AB B?B EB= , FB B F;< @ BF2@: ;< ;AB B B?; ;A, ; AB U,0 ;< A<2= , ;, B ; <;AB 2,0;: AB ?, B ;< ;AB ?< ?2>0 < ;A, ; AB U,0 ;< HB 0,? ?B= < =B ;< ,22<U ;AB <;AB ; U< ?< F0 ;< B0?,FB > <2B0;B=6 & AB + ,? , =E, ?B= < ;AB 5;A AB 0B ; ;AB BF< ; ;A, ; AB U,0 ;> B= H@ : $; 0A ; <<F0 V + ,? A, = H>; : + < ;>D>B0B V , = ;A, ; 2, >0B2 U ;A C> <;80 B, B0; = E 0 < U,0 ;<< , < ;< 0>??<> A 6 B F BF, B= ;< 0> B , = 0,0;B : , = ;< = B DA; D 6 B < =B B= A 0 ; <<F0 ;< 0> <> = , ;, B : B, ,0 UB22 ,0 < ;: U ;2 , =<>H2B 2 B < = '' , = ?< ; >B= ;< 0; B D;AB , = BF, ;0 <2= U,2206

) <;A D: ;AB B < B: ?<>2= BW?BB= B@ B 80 B2 B UAB + ,? , = ,> > = A,2;B=: , = FB ?B = = <; <EB , ; ,22: , ;B ;AB D A, = HBD> >F< ;AB 5;A6 ;AB BW; < D ;AB $; 0A , @ U,0 0; 22 0; , ; < , @: 0, EB ;A, ; , ?, E, 2 @ B?< , 00, ?B: F>0AB= < ;AU, = < + ,? 80 F<0 ; < < ;AB >FFB < 1 ,@< : = 0?<EB B= C> <;80 <>; F<0;0 ;AB = B?; < < 2?, AB=B , = +B B0: , = BF< ;B= ; <& B22 D;< ;A, ; ;AB B B @ E,0 0; B D;A: U ;A ,22 , 0: ;A 0 = B?; < 6 %B ;A80

% DA; * E 0 < : + ,? : , = 2, =B80 , = 0< 80 ?, E, 2 @ V HB < B , ; , B 6

0; * E 0 < V , ; , W<6

. @ / 0 * C 6200 5 , - 25 0 2)82 2.2(

@ / 0 * C - H - (

B , @ / 0 * C *A 2 (

I , @ / 0 * C A2 . 2 < , - # -0?(

. @ / 0 * " 2 . %* - 2 80 2 . -(7(%2 6A- 80 ! * 5 -0- C ! * -0

) - . 20(

#- %* 80 @ / 0 * C , 2 . 2 < , - # -0?(

; U,0 ;AB , ?A: E 0 H2B < ;AB <;AB 0 =B < ;AB , D>0: UA ?A AB2FB= ; <= B?B EB " , B ,0 ;< ;AB DB B , 2 <EB B ;0 < ;AB " B ?A , @6

^ BB * B2, D , EB: : , = (, ?A<;80 BW?B22B ; <;B0 ;AB B< 6

= = L # * # * % 9) # 1 044

 ;AB F<UB ;< H D 0>?A , < ?B ,D, 0; >0 ,0 ;< B =B ;AB ?< ;B0; , ,;;B < =<>H;

 , 0>FF2B B ;, @ = 0F,;?A: = ,;B= ;AB 0, B = ,@: & B22 D;< ,==0G K ; T0; ;A<>DA; ;AB B B @ UB B < :, = , <; M> ;B ?B ;, @B; ;A,; ;AB@ , B <; D< D6 6 6 6 2, ?< E ?B= ;A,; ;AB B 0 < , A 0 0B 0B0: UA< A,0 BEB F,00B= , U ;B +< ;>D,2: UA< U<>2= <; B?< B = ;AB ;< D< <U: ,;AB ;A, ;< B =B,E<> ;< , ;, ;AB 0B2EB0 >F< ;AB 3BRB B => D ;AB U ;B : < ;A, ,;;,? <> F<0 ; < : UA,;BEB ,@ HB ;AB 0; B D;A < ;AB B < ?B B ;068

AB B UB B: =BB=: B ;AB " B ?A ?, F UA< ,=E 0B= 1,00B ,;< ?< ; >B A 0 B; B,;: H>; AB A,= < ;B ; < < ;, D >F ,; = F<2 ?@ ,;B H ,E D 0< , @ F,00B= =, DB 06 B A,= B0<2EB= ;< , ;, A 0B2 HB;UBB , ;, B , =;AB 3BRB B:, = ;< ?,22 =<U * <>B; = <;AB B < ?B B ;0 h ;AB A<FB ;A,;: B B ;AB U ;B U,0 <EB : ;AB # FB < DA; = B, 0 ;< 0; B D;AB A ;< , < ?B UA ?A: U ;A ;AB ?< <FB ; < < <>2; < =,2>0 ,: U<>2= B ,H2B A ,22@ ;< TB0> B ;AB < B 0 EB: , = , B , 0B?< = , = < B < =,H2B ,;;,? >F< ;AB % B06 ,=<F; D ;A 0 B0<2EB AB U,0: ;A<>DA ,0 @B; AB BU ; <;: ?, @ D <>; ;AB 0; >?; < 0 UA ?A ;AB # FB < U,0 ,; ;A 0 EB @ < B ;I) <EB HB J = ?;,; D ;< "<@ ,; +, 06 $>; & B22 D;< A,= <; U ;;B ,; ,=< UAB AB B =B= %< = EB F<<2 < ;AB ;B < 0 < , +< ;>Y D>B0B U ;B :, = ;AB B = ;AB + ?B < #002 D U,0 < ?B= ;< HBD < ;AB 0; < 1 ,?A: U ;A > =B O : B < A 0 < D ,2 < ?B: ;AB B; B,; UA ?A AB DA; A,EB ?< B ?B= <) <EB HB U ;A <EB :

AB 0?AB B < 0;, E D <>; ;AB " B ?A: UA ?A & B22 D;< A,= =BE 0B= B, 2@ :, = HBD> ;< BWB?>;B BF;B HB : U,0 <U ;, 0 B B= ;< , = B B ;, B,6 1,00B , A,= HBB ,H2B ;< B => B < , < ;A < ; < ;AB % 0H< % B0G ;AB M>B0; < <U U,0 UAB;AB AB U<>2= HB ,H2B ;< 2 EB 0< 2< D ;AB 2, = HB;UBB ;AB < 1 ,@< , = ;AB 3BRB B6 & B22 D;< ?<>2= <; HB 0> B < A 0 =,;,: ?,2?>2,; D ;AB =,@ EAB BWA,>0; < U<>2= < ?B < B ?< FB2 ;AB " B ?A ;< 0A ; ;AB

 - 5 * * # /- 6** " "*/(P'= = (

) <;,H2@ ;AB ?<2> < (, =, B: < UA ?A UB 0A,22 0FB, F B0B ;2@6

 ^ ?2>= D 0 ? 'B,?A?,0B:, =BW?2>= D B < ?B B ;0 B?B EB=2,;B 6

1 ,00B ,: < ; ;AB < ;AB A, =: ,20< B , B= B, 2@ M> B0?B ; < , @ =,@0: ;AB < 2@ F< ; , ; ?A, DB UA ?A AB ,=B ;AB ?, ;< B ;0 < A 0 , @ HB D ;A , ; AB <EB= 2 ,>0B2 0 = E 0 < ??<0B ; < , ; , ? : ;< 22 ;AB =, DB <>0 D, F HB;UBB ;AB = , = ;A < F0: UA ?A A,= BW 0;B= <) <EB HB 6 ;AB = , = = AB F>0AB= < U , : ,D , 0; +,? 0 +< ;>D>B0B , = 0< 80 2 DA; ?,E,2 @: , ?< 0 =B ,H2B < ?B: ?< 0 0; D < 2 ,>0B2 0 UA<2B = E 0 < , = 0 W 0M>,= < 0 < ;AB ;A < F0: , = (B B ,2 + B B <>2; U ;A ;U< ?,E,2 @ BD B ;0 , = ;A BB H, ; ; ,2 < 0 < ;AB = < 8F06 ;B 0< B 2 EB2@ H>; H2<<=2B00 0 0A D: ;AB ,22 B= ; <<F0 B; B= H?2 = ;AB < 1 ,@< : BE,?>, ; D ;AB E 22,DB < ,2, B0 HB@< = ;AB 0; B, : , = = ,U D ;AB ?,E,2 @ F ? B;0: UA ?A A,= A ;AB ;< AB2= 0< B D <> = < ;AB > ;AB H, 6 A 0 , , ?< B= & B22 D;< A 0 ?< ??>0 < ;A, ; B, 2@ ;AB UA<2B " B ?A , @ U,0 <U ?< ?B ; ,;B= < ;AB , ; , B +B B0 2 B: , = ,=B A < B B2>?; , ; ;A, BEB ;< ; , B ;AB < B 0 EB6

1 B, UA 2B) < ;H > 80 ?,E,2 @: 0>FF< ;B= H@ 0 ,22 =B; ,?AY B ;0 < ;AB , ; @ <) B@80 ?< F0: A,= F B00B= 0< BUA, ; > ;AB ;< ;AB < ;A: < =B ;< <??>F@ ,H <,=B ; , ?; < 2, = < UA ?A ;AB , @ DA; BB= ;0B2 : , ; ,0 ;A, ; D BU A, =B BEB @ = ,@6 " < A 0 AB,= M>, ;B 0 , ; > B , = < ,H, <0: < ;AB A< , < H , <,=: AB ?< ; >B= ;< 0B = <> ; 0; < D B?< , 00, ?B0 BEB @ = B?; < : < UA ?A 0< B <??,0 < ,22@ F>0AB= ,0 , ,0 %B , < ;AB <,= ;<U, =0 < H , : , = <;AB 0 0?<> B= ;AB 2B ; H, < ;AB 2<UB 3BRB B , = ;AB) ,H,<6 AB 2 ; < ;AB BW?> 0 < 0 U,0 WB= H@ ;AB ,?; ;A, ; & 20< 80 H D,=B < +< ;>D>B0B 2 ; , 0; 22 2,@ , ; #0F A,2: , =: ;A<>DA ; U,0 B=>?B= H@ =B0B ; < , = 0 ? Y B00 ;< : B : U,0 BF< ;B= ;< 1 < ;H > ,0 , 0B <>0 < ?B: U ;A UA ?A AB A,= HB; ;B <; B==2B6 , ;80 ; <<F0 , ; < H , V , UB, 2 ; , = E 0 < V UB B ,20< B0; , ;B= , ; >?A <EB ;AB B,2 0; B D;A6 ; U,0 <; ; 22 2, ;B ;A, ; 0ABB 0; , E, ; < = <EB ;AB " B ?A > ;AB , B2=: , = BEB,2B= ;< ;AB ;AB UB, B00 < ;AB . < B < ; <<F0 UA ?A AB B= ;AB >F< ;AB < ;AB 0 =B6

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+

O ' 1 #) 8 ' # 22# ' ') 22# 1 ' X*EG?6

,H0<2>;B2@' ;B >F;B=' ' ;AB' B =' < ')<EB HB ' ,0' ' ;AB' HBD D' < ' ?;<HB 6' B' ,;;B F;' ;<' H B, ' ;A <>DA' ;AB' 0? BB ' < ' +< ;>D>B0B' BD>2, 0' A,=' HBB ' ,=B' ')<EB HB :' H>;' < ' ;0' , 2> B' 1,00B ,' A,=' ,0' @B;' <' <U2B=DB6' .AB ' "<@' B,?AB=' <= D<:' < ' A 0' U,@' ;<' +, 0:' AB' A,=' A, =B=' <EB ' A 0' B0?< ;' < ' < B' H,;;,2 < ' < ' , ; @' , =' ' A< 0B B ' ;<' (B B ,2' (, =, B:' UA<' U,0' < =B B=' ;<' 0; B D;AB ' ;AB ' U ;A' ,22' ;AB' ?< E,2B0?B ;0' < ' ;AB' @' < ' +< ;>D,2:' , =' U ;A' ;AB' D, 0< 0' < ' 2 B =,' , =' <= D<' ,20<:' ' ;AB0B' 2,0;' A,=' <U' HBB ' B2 BEB=' H@' ; <<F0' < ' * <>B;80' 5;A' < F06' ;' ;AB' AB,=' < P6 ' B :' ,0' 1,00B ,' ?,2?>2,;B=:' AB' ?<>2=' ?>;' A 0' U,@' ;<' N< ' ;AB' , ' , @:' B0?< ; D' ,' D B,;' ; , ' < ' > ; < 0:' < ' UA ?A' H<;A' ;AB' , ; 22B @' , =' ;AB' , ; @' ,;' ;AB' < ;' UB B' 2, B ;,H2@' ' BB=6' (, =, B' ?<>2=' <;' D,;AB ' ' ;AB' 2 B =,' D, 0< :' ,0' ;A,;' F2,?B' U,0' 0; 22' H2<? ,=B=' H@' 2EB ,80' +< ;>D>B0B6' $>;' U ;A' ;AB' ;U<' H,;;,2 < 0' < ' <= D<:' ,==B=' ;<' "<@80' 2,;B' B0?< ;:' , =' ,' ,00' < ' ?< E,2B0?B ;0:' AB' A,=' ?<22B?;B=' 0< B 6 ' B ' H@')<EB HB ' ' ' ;AB' =,@' < ' UA ?A' AB' , ?AB=' H@' ;AB' ,H>D,2 $B2 < ;B "> =,<' <>;B' ;<U, =0' +> AB;B' , =' ;AB' 2<UB ' 3BRB B6' B' U,0' ?> 0B=' U ;A' = B,= >2' UB,;AB :' <22<UB=' , =' A, ,00B=' H@' ,22' ;AB' =B , ,' < ' ;AB' (,0;B22<' $, ?<' ?<> ; @:' A, FB B=' H@' A 0' AB,E@' ?< E<@:' , =' >?A' ; <>H2B=' H@' ;AB' = 0< =B 2@' ?< E,2B0?B ;0:' UA<' UB B' 2, DB2@' F < B00 < ,2' ,2 DB B 06' $>;' AB' D<;' ,0' , ' ,0' , = D<0' < ' ;AB' <H B , "< <0,' <,=:' < 2@' ;BB ' 2B0' < ' +> AB;B:' UAB B' %< 0< ' U,0' ,U, ; D' A ' < ' ;AB' 3BRB B6' B B' AB' U,0' H <>DA;' ;<' ,' 0;, =' I)<EB HB ' 4J' H@' ;AB' 2<<=B=' , =' H =DB2B00' 0; B, ' < ' ;AB' <=B06')<' BU0' A,=' B,?AB=' A ' < ' 1,00B ,:' UA 2B' AB' U,0' ,00> B=' H@' +< ;>D>B0B' =B0B ;B 0:' UA<' F <H,H2@' UB B' 0B ;' <>;' ;<' =B?B EB' A ' H@' ;AB' D<EB < ' < ' H , ;B0:' ;A,;' ;AB' 1, 0A,2' A,=' <;' < 2@' BE,?>,;B=' A 0' F<0 ; < ' HB < B' ;AB' % B0:' H>;' U,0' B; B,; D' < ' F, ' E ,' ;AB' 1 < =BD<6' AB@' ,==B=' ;A,;' 22' A,=' N>0;' B,?AB=' H , ;B0' U ;A' : ' B :' , =' U,0' ,H<>;' ;<' , ?A' ,D, 0;' A 6' AB B>F< ' (, =, B' A,0; 2@' ;> B=' H,? :' B,?AB=' +B , ,?< ' H@' < ?B=' , ?AB0' <

T $B2 ,080' D> B0' I 6' 4J' D EB ' AB B' >0;' HB' ,H<>;' ?< B?;:' <;' ;AB' : ' < ' " < :' , =' H ' %('%" A:%'%(' "< ' ;AB' ;U<' <= D<' H,;;,2 < 0' UB B : ' 0; < D:' "<@80' B0?< ;' P :' , =' (, =, B' ;<< ' U ;A' A ' 0< B' < ' A 0' <U ' = ,D<< ' BD B ;:' HB0 =B' ;AB' ?< E,2B0?B ;06

) <EB HB 5: , < ;AB ?B B; B= ;< <BH D<: A , E D 2<0; O B , = A< BBO H@ = 0B , 0B , = , ; D>B => D A 0 22 ?< =>?; B= BWFB= ; < 6 AB A , = F>0AB= < U , = ;BB 2BO > ;AB < ;AB ;A: AB U<>2= A , EB D<; ;< ;<>?A U ;2 %< 0< : , = B , ?AB= 1 , 00B , 8O AB , = M> , ;B O 0 , B; @6 & B22 D;< : <; U ;A<>; B , 0< : F < B00B= 2 0B2 > , H2B ;< ?< F BAB = ;A 0 0; , DB , ?A , = ?<> ;B , ?A6 K = < <; BW , ?; 2@ > =B Y 0; , = ;A 0 <EB B ; , = K ;A 0 , ?A U , O < =B B= H@ 0>FB < , >; A< ;@: , = U , O ?< B?; B= U ;A , @ <; AB , , DBY B ;0: ; A , = BEB @ , FFB , , ?B < : , = U , O , ; ;B =B= H@ , 22 ;AB ?< 0BM>B ?BO < : , F B? F ; , ; B , = < ?B= B; B , ;

B B: ;AB : UB 2B , EB 1 , 00B , , = A O , @: ? , ;< B= ;AB 0F , ?B HB; UBB ;AB < N 1 , @< , = ;AB 3BRB ?: 0; 22 =B0; ;>; B < BUO < " , ?B: , = 0; 22 B ; B2@ D < , ; UAB; AB < < , @ B =B , E<> U , O HB D , =B ; < B2 BEB ;AB 6 ;AB > ;AB =< DO => D ;AB ;A BB < ;AO ;A , ; B =B= < 1 , ?A : : UB 0A , 22 ;B22 B20BUAB B6 > ?B ; ; < 0 , @ ;A , ; : =B0F ; B , @ =, DB O , = 0 0: . B22 D;< 8O 0?AB B < 0; , E , ; < U , O F2 , @B= <>; ; < ;AB B =: , = , ?A BEB= ?< F2B ; B 0>??B006 ;AB F E , ; < , = 2<00BO ;A , ; ;AB " B ?A 0> B B=: , = ;AB , ; <? ; BO ;2 , ; ;AB@ ?< ; ; B=: < ;AB = ?>2; BO < ;2 B $; 0A < , =B A B V U ;A , < H0; , ; B B B @ 0; 22 < ; < A : , , ?; <>0 BDB ?@ , = , A , 2 0; , EB= F<F>2 , ; < HBA = A % 0H< : , = , = 0I N> B; D F <0FB?; ;A , ; <>2; DA; ; , B , A , = ;AB D , B V ;AB <> ;A E<2> B < ;A 0 U< U 22 D EB >22 =B; , 206

T 1 () ' #%(E 6 F6 : ; < , > > =6
H =6: F6 P: ; < %< = % EB F<<26

% & " O O

" @ & + T V = =

% ! $

+#)) #))) *) #

= ; , ? D ;AB ,22 F< ; , ; , F, D < +< ;>D,2: =<U ;<;AB =B,=2<? < ;< , ; , B :UA ?A HBD, ,H<>;' ;AB ;A<) <EB HB : :, =U,0;<B => B ; 22 ;AB 0;< 1 , ?A ;AB 0>??BB= D @B, :UB A,EB HBB <H2 DB=;<2B,EB > ;<>?AB=BEB ;0:? E 2 , = 2 ; , @: , @<;AB F, ;0< ;AB +B 0>2,=> D ;AB ,>;> 6 2@;AB =,2>0 , ?, F, D 0 A,EB HBB ?, B==<U ;<) <EB HB 6) < ;AB F, UB A,EB ; ,?B=;AB ?<> 0B< , , 0 < > ;AB ;A, BF;B HB 6 # ,0;B F, < > ;AB ;A, >D>0; 6 1 < B<EB : 2 ;;2B A,0 HBB 0, =< ;AB DB B ,2 B B?;< ;AB " B ?A <??>F, ; < ?,>0B=H@ ;AB = E 0 < < 0>F B B ,>;A< ;@UA ?A) ,F<2B< 0, ?; < B= ;AB 0 F D < < ;AB F< ; , ?B< ;AB 2< D =B B B= BB; D < ;AB F, 0A < ;B0:UA ?A ,00B H2B= , ; ,= R ;AB ,>;> 6 & ;A ;AB0B F< ;0 UB >0;=B,2 HB < B F <?BB= D ;< , , ;B ;AB ?, F, D 0 < 6

AB 0> EB@ < ;AB 2 ; , @ <FB , ; < 0: < B < UA ?A UB B F, ; ?>2, 2@ F< ; , ;: >0; F B?B=B ;AB 0> , @ < ;AB F<2 ; ?,2 0 ;>, ; < : U ;A BD, =;< 9 D C<0BFA < ;AB < B 0 =B , =;AB < ;B0 < ;AB <;AB 6 "< ;AB ,?;0 < ;AB 9 D , =; AB < ;B0 A,= , 2>B ?B BW;B = D , HB@< =;AB < ;A0 UA ?A ;AB@ HBD, : , = UB B: =BB=: , , ?;< 0 ;AB +B 0>2, 0; >DD2B < @B, 0 ;< ?< B6 $>;;AB =< D0 < ;AB , B0 (,2 ? , , = 0;> ,0 < ;AB < B 2, : , ; , 2< , , = . ,2B ? , < ;AB <;AB : ?, B,0 2@ HB = 0 00B= , BU F, DB0 ;AB@ UB B H>; F B2 , B0 ;< ;AB D B, ;B <FB , ; < 0 ;AB 0F D < 6

& B ,@ 0;; > ;< ;AB < ;A UB0;6 & AB 1 ,00B ,

8 B? FF6 4 6 T BB FF6 , = P P6 T BB FF6 O6

O ' #' #) *' "' #' ! # ' ' 0 2 */(

?<,0;' A,=' BF;' $< B;' , =';AB' ; <<F0' ' , ; , =B ' , =' $ 0?,@'
>22@' B F2<@B=7 ;AB@' A,=' = 0; ,?;B=' B ,0:' , "', B22 :' , =' BEB '
;AB' D, 0< 0' < ';AB' F <E ?B' < '$> D<06 AB@' A,=' 0,EB=' 1 ,A@'
, =' 2EB ,' < ' ,;;,? :' , =' A,=' 2 DA;B=' >F' ,' H2,RB' < ' '
60> B?; < ' ' ;AB' UB0;B ' A 220' < ' , ;,H ,' UA ?A:' ;A, 0'
;<' ;AB' B B D@' < '+< 2 B ' , =' A 0' ?<22B,D>B' %<>D,:' U,0' BEB '
BW; D> 0AB=6

1 B, UA 2B' ;AB' ,00' < ' " B ?A' ; <<F0' HB;UBB ' $> D<0' , =' +, FB2> ,V ;AB' 5;A' < F0:' ;AB' ! <> D' (>, =' * E 0 < 0:' , =' ;AB' D, 0< ' '),E, BV A,=' HBB ' K?< ;, B=' 8' H@' , ' B B @' < ' ,' = B B ;' 0< ;6 B B' ;AB' 2>B ?B' < ' ;AB' $; 0A' ,E,2' 0>F BY ,?@' U,0' 2 ;;2B' B2;7 ;' U,0'=>B' ;<' ;AB' B B D@' < ' F, , =0' ,2< B' ;A,;' ;AB' : ' B '> =B ' * <>B;:' <D>B;' , =' *> <>0; B :' , =' B 22B' UB B' F BEB ;B=' => D' ;AB' < ;A0' < ' BF;B HB :' ?;<HB :' , =')<EB HB ' < ' =< D' , @;A D' ;<' AB2F' 1 ,00B ,6 2=' ,0; 2B:'),E, B:' , =';AB' 2, =0' < ';AB' ' FFB ' #H <:' UB B' BF;' ' ,' ?< 0;, ;' ;> < 2' H@' ,' 0?< B' < 'D>B 22B <' ?A B 0:' < ' UA< ' ;AB' B2=B ' 1 ,' U,0' ;AB' 2B,= D' D> B6 & B' A,EB' ,2 B,=@' A,=' <??,0 < ';<' 0FB, ' < ';AB' BWF2< ;0' < ' A 0' B2,; EB:' K;AB' ;>=B ;8 ,0' AB' U,0' ?,22B=:' ;<' = 0; D> 0A' A ' < ' A 0' > ??B:' , =' A,EB' <;B=' A 0' ,2' ?,F;> B' H@' >?AB;' A' " , ? 0?<' #0F<@' @' 1 ,' A,=' ,22 B=' ;AB' B2 ?0' < ' A 0' BFABU80' H, =:' , =' HBD, ' A 0' 2< D' ?, BB ' < ' , =0' , =' ?<> ;B , ?AB0' ' F 2' 6 2 0' ?B ; ,2' F2,?B' < ' B >DB' U,0' ;AB' <>DA' ?<> ; @' < ';AB' H< =B 0' < '),E, B' , =' ,D< :' UAB B' AB' BF;' A 0' , ' =BF<;' ,;' ;AB' AB,=' < ';AB' E,22B@' < ' < ?,27' H>;' AB' < ;B ' , DB=' ,0' , ' , B2=' ,0' $ 0?,@' , =';AB' F <E ?B0' < ' < ,' , =' $> D<06 2 <0;' < ' A 0' 0;' ,FFB, , ?B' AB' <H;, B=' ,' ,0;B @' <EB ' ;AB' <;AB ' ?A B 0' UA< <FB ,;B=' < ' H<;A' 0 =B0' < ';AB' ' FFB ' #H <:' A,E D' U< ' A 0' F2,?B' H@' ;AB' 0> , @' F <?B00' < ' 0B R D' , =' 0A<<; D' < B' #?ABEB ,:' K UA<:8' ,0' AB' U ;B0:' K U,0' ;AB' ;B < ' < ';AB' E 22,DB0' < '),E, B:' UA ?A' AB' <FF B00B=' , =' F2> =B B=' ' ,' ;A<>0, =' U,@0:' ; 22' ;AB@' ?< F2, B=' ;<' B' ?< ?B D' A 6 ' , B0;B=' A ' ,;' #0;B22,' < ' C> B' :' :' ?,>0B=' A ';<' HB' 0A<;' U ;A' ;A BB' < ' A 0' F ? F,2' ,??< F2 ?B0:' , =' ?< F< ,;B=' A 0' H, =' IP ' <<;' , =' ' A< 0BJ' U ;A' @' <U ' B ' 68' 1 ,' U,0' ;AB' 0FB? ,2' B B @' < ' B 22B:

8' BB' F6' P6

T' BB' 1 ,80' T6' %' ' .% (:' H . ' F>H2 02 B=' ' %< =< :' => D' A 0' BW 2B:' 22'

;A BB H, ;; ,2 < 0 0; < D: , = UB B HB D ?< ; >, 22@ A> ;B= < ?< B ; <? ?< B 6 ! B ;: =B0F ;B ;AB UB, B00 ;AB <FB B2=: ;AB ;B0; B M>, B20: ;AB BM>B ;<FF B00 < < ;AB B<> ; @ 0 =B: , = ;AB B <? ;@: ;AB@ B =B B= D<<= 0B E ?B ;< F, : , = ? =B ;, 22@ ;< (B, ; $;, , = ;< , 22 #> <FB: H@ F D =<U ; <; AB 0< 2 ;U ?B ;AB <\ > HB 0 < D<<= " B ?A ; <<F06 @ < B UA< A, 0 B, = ;AB = 0F, ;?AB0 < ; AB ?< , =, ;0 <) , F<2B< 80 K 2 ;, @ D<EB B ;0:8 < ; AB = , B0 < ; AB < ?B 0 UA< 0B EB= B 22B80 < * < 0B B80 < , B22 80 2@ D ?<2> 0: U 22 B?<D RB , B , , H2B 2 B B00 HB; UBB ; AB 0 ;>, ; < < , , 0) < ;AB F, => D , = , = ;A, ; > ; A ?, => D 5 , = 5 6 % DA; 2@ <E D D>B 22, H, =0: > A, FB B= H@ , H, 0B ;< =B B = < , ; , ; <; UB DA ;2 B =<U : , = UB22 0B EB= , 0 ;< ;B22 DB ?B H@ ;AB B0 =B ;0 < ; AB ?<> ; @ 0 =B: ?, F, , 2@0B ;AB , ?; < < , ;B2@ 2, DB > HB < BD>2, ; ; <<F06 ;AB < ;A B, 0; < F, : UAB B ;AB " B ?A UB B B D, DB= <; U ;A B B 0?, ;; B B= H, =0 < D>B 22B <0: H>; U ;A ;U< BD>2, , B0: 8 * < B228 0 , ; , 2, 0 , = , <80 . , 2B ? , 0: ;AB < ;> B < U, ; ;<< <=B? 0 EB ;> => D ;AB , >;> < : ;A<>DA < B = B, = >2 H2<U ;< ;AB F, 0A ?, >0B V ;AB 2<00 < < ;<0, V U, 0 ;< , 22 ;AB U ;B UA ?A <22<UB=6 & B 2B ; >?AB; >D>0; : B0; , H2 0AB= A 0 BU2@ ?< M>B B= F<0 ; < 0 , ; %B = , , = 1 BM> B R, : , 0; B < , 22 ;AB F2, 2, = < , D< : , 0 UB22 , 0 < , ; 0; F < & B0; B , ; , 2< , : , = < 2@ U, ; D < ;AB ?< <FB , ; < < 1 , ?=< , 2= , = ;AB 4; A < F0 ; < B?< B ?B A 0 <FB , ; < 0 A, ; ?< <FB , ; < : A<UBEB : U, 0 2< D =B B= A 6 AB # FB < 80 2, 0; DB B , 2 < =B 0: UA ?A A, = B, ?AB= >?AB; C> B: H B 2@ F B0? HB= ; < A ;A, ; ;AB ?< M>B0; < ;AB ? ;@ , = D=< < . , 2B ? , U, 0 A 0 , 2 <HNB?; : H>; ;A, ; AB >0; 80; H B, ;AB F, 0A 2 B H@ ?, F; > D < ;<0, : ;AB D B, ; < ; B00 < ;AB %<UB # H <: , = , , D< , : ;AB , 0; < DA<2= < <>; AB , ; , 2< , " < H<; A ;AB0B 2, ; ; B <FB , ; < 0 AB U, 0 ; < ?<> ; < ; AB , = < 1 , ?Y =< , 2= , = ;AB @ < , ; , 2< , B2@ D < ;A 0 0>FF< ; : >?AB; : , ; B 2B00 ;A, , < ;A A, = B2, F0B= 0 ?B ;AB ?, F; > B < 1 BM> B R, : A, = F>0AB= A 0 , =E, ?B= D>, = =<U ;AB # H <:

T BB FF6 56 %() . % > =B 1, @ 56

^) . % > =B BF; 6 6

; 22' ;' U,0' ,;' ;AB' EB @' D,;B0' < ' < ;<0,6' B' =B;,?A B ;' BEB ' F,00B=' ;AB' ;<U :' , =' 0B RB=' ;AB' B @' < ' F<0;,:' ;AB' < 2@' F,00,DB' < ' ;AB' #H <' B,' ;0' <>;A:' ,?;>,22@' ?>;; D' ;AB' D B,;' <,=' < ' , ,D< ,' ;<' .,2B ? ,:' , =' < 2@' 2B,E D' ;AB' H =DB' < ' < ;<0,' ;0B2 ' <FB :' < ' ;AB' 2 D' < ' ;AB' <FB ,; < 0' < ' , <' , =' 8 * < B226' 1 B, UA 2B' >?AB;' U,0' F BF, D' A 0' 0 BDB ; , ' ,;' 1 BM> B R,:' , =' U, ; D' < ' ,' 0B' ' ;AB' #H <:' UA ?A' U<>2=' ?< B ?B' ;<' HB?< B' ,E D,H2B' U ;A' ;AB' ,8 E,2' < ' ;AB' ,>;> ' , 0:' ' < =B ' ;<' 0A F' A 0' D> 0' =<U 0; B, ' ;<' ;AB ' =B0; B=' D<,26' B' U,0',;' ;AB'0, B';' B' , D';AB'2, =' <>;B';<' < ;<0,' F,00,H2B:' H@' BF, D' ;AB'<2=' 2;, @' <,=' < ' ,0FB';<' 1 < ,' , =' E 0,:' UA ?A'2 ,=' HBB ' ?< 0; >?;B=' => D' ;AB' U, T0' < ' ;AB' F, 0A' >??B00 < :' H>;' A,=' 2< D' ,D<' ,22B ' ;<' > 6

>?AB;' U,0' M> ;B' ,U, B' ;A,;' H@' ;A >0; D' ,' ?< F, ,; EB2@' 0 ,22' < ?B V AB' A,=' < 2@' H <>DA;' >F' : ' B V ;<' ;AB' B,' B DAH<> A<<=' < ' < ;<0; :' AB' U,0' 0 D' ;AB' =, DB ' < ' HB D' ,;;,? B=' ,;' < ?B' H@' ;AB' @' < ' .,2B ? ,' < ' ;AB' 0<>;A' , =' 8 * < B228' 0 ,;,2, 0' < ' ;AB' < ;A6' $>;' AB' ; >0;B=' ;A,;' 2,?' =< ,2=' , =' ;AB' 4;A' < F0' U<>2=' BBF' ;AB' 2,;;B V ;AB' < B' < Y =,H2B' B B @V B F2<@B=:' UA 2B' AB' A,=' ,' UB22 <> =B=' ?< ;B F;' < ' ;AB' DB B ,20A F' < ' , <:' UA<' A,=' ,2U,@0' F <EB=' A 0B2 ' ;AB' <0;' ?< FB;B ;' , =' ; =' < ' ?< , =B 06' $>;' 1 ,?=< ,2=' , EB=' 2,;B:' A,E D' HBB ' < ?B=' ;<' 0FB =' ;AB' UA<2B' 0> B :' ,0' A,0' HBB ' ,2 B,=@' B2,;B=' ' A 0' ; F2B' BE ?;>,22 D' < ' $, ?B2< ,:' , =' B, UA 2B' ;AB' .,2B ? , ' , @' ?, B' ;<' ;AB' < ;6' ;0' 2B,= D' = E 0 < :' > =B ' $,00B?<> ;:' ;A B,;B B=' 1 < B2 ,:' < ' >?AB;80' 2, :' B, 2@' ' >D>0;:' A<F D' ;<' = ,U' A ' ,U,@' ;<' =B B =' ;A 0' <>;F<0;6' $>;' ,' 0 D2B' H D,=B' > =B ' 1 < ; ,8 B' 0> ?B=' ;<' ;> ' H,?' ;AB' .,2B ? , ' =B;,?A B ;:' , =' >?AB;' BF;' A 0' F<0 ; < 06' 8 * < B22' B, UA 2B:' E, 2@' A<F D' < ' 0<2 =' AB2F' < ' , <:' A,=' N< B=' ;AB' = E 0 < ' < ' A 0' , @' UA ?A' U,0' BF;' ,;' " ,2?B;' ' , =' , ;B ' ;A B,;B D' >?AB;80' AB,=' M>, ;B 0' ,;' 1 < ,' < ' C>2@' :' 0<' ,0' ;<' = 0; ,?;' A 0' ,;;B ; < :' 0>==B 2@' ;> B=' ,0 =B' , =' B ;B B=' < ;<0,' U ;A' : ' B 6' ,22 D' <>;' ,22' ;AB' ; <<F0' ,E, 2,H2B' < ' ,' 0< ; B:' AB' 00>B=' < ' ;AB' ;<U ' < ' >D>0;' :' , =' HB,;' >F' ;AB' <>;F<0;0' < ' ;AB' = E 0 < ' > =B ' %,E,2:' UA ?A' U,0' ' <H0B E,; < ' HB < B' A 0' D,;B06' $>;' ;A<>DA' ;AB' ,;,2, 0' <>DA;' B ?B2@:' , =' = <EB' ' ;AB' 0;'

' BB' F6' 6 b BB' F6' 6

$ S 1 *) % * ' CI 1) ' ' # ' 05

< ' BEB <2 ' , =' + D , ; B22 6' B' A , =' 2B ;' HBA =' A ' (B B , 2' $, , D > , @' = 8 22 B 0:' ' ; AB' F<0 ; < ' UA ?A' B 22B' A , =' HBB ' U< ;' ;<' A<2=:' , 0' ; AB' =B B =B ' < ' ; AB' F> =, ' , =') < ; AB ' , ; , 2< ,' , 0' , ' , 0' <0; , 2 ?A6' # DA; BB ' ; A<>0, =' B ' UB B' ; <2=' < ' < ' ; A 0' ; , 0 :' ??>= D' , 22' ; AB' (B , ' H D , =B07' H>;' , ; B ' D, 0< D' (B < , :' <0 , 0:' " D>B , 0:' , =' <0; , 2 ?A:' =8 22 B 0' A , =' <' D B , ;' B2= < ?B' 2B ;:' , =' <> =' >22' B F2<@Y B ;' ' U , = D' < ' ; AB' , =0' < ' 1 , 0<:' <E , :' , =' ; AB' <; AB ' M>B2B; B' 2B , =B 0' >F< ' ; AB' ?< > ?, ; < ' HB; UBB ' (B < , ', =' +B F D , 6') B , 2@' : ' B ' A , =' , 20<' HBB ' 2B ;' ' $, ?B2< , :' ??>= D' , @' 0 ? :' , =' ; AB' ; A BB' = E 0 < 0' U ; A' UA ?A' 1 , ?Y =< , 2=' , ?AB=' ; <' N< ' >?A?; ' = =' <; ' BW?BB=' P: T ' 0 , H B0' , =' H , @< B; 0:' ; A<>DA' ; AB' UA<2B' < ?B' < ' ; AB' 4; A' < F0' U , 0' B? < B=' , ; ' <EB ' : ' B 6

' >D>0; ' ' 1 , ?=< , 2=' < ?B=' ; AB' +, 00' < ' =, 2:' , ; B ' 0< B' 0 0A D' U ; A' ; AB' 0< , ; B B0:' , =' B ; B B=' ; AB' F2 , ' < ' , , D< , 6' ; ' U , 0' ; AB' BU0' < ' A 0' , FF <, ?A' ; <' ; AB' , ; , 2 , ' ?, F ; , 2' UA ?A' H <>DA; ' 8 * < B22' H , ? ' ' A , 0; B' < ' < ; <0 , 6' B' ?< ?B ; , ; B=' ; AB' D B , ; B ' F, T; ' < ' A 0' ; <<F0:' < ' ; AB' A@F<Y ; AB0 0' ; A , ; ' ; AB' 4; A' < F0' DA; ' HB' ; B = D' ; <' 2 , @' 0 BDB' ; <' ; AB' F2 , ?B6' B' H <>DA; ' =<U ' , F<EB =B8 0' = E 0 < ' < ' ; AB' < ; A' ; <' N< ' ; A<0B' < ' H , <2 , :' , 0 B2=:' , =' ; AB' $, < ' =B' # <2B0:' UA ?A' UB B' , 2 B , =@' < ' ; AB' 0F<; 6' ; ' 0<< ' HB? , B' <U :' A<UBEB :' ; <' ; AB' F , , =0' ; A , ; ' 1 , ?=< , 2=' ?<>2=' <; ' HB' HB ; ' < ' 0 BDB' <FB , ; < 0:' < ' AB' U , 0' H D D' U ; A' A ' B ; AB ' ; AB' AB , E@' , ; 22B @' < ' ; AB' B < <>0' ; , ' < ' F <E 0 < 0' ; A , ; ' U<>2=' HB' BM> B=' ' 0>?A' , ' ? , 0B6' B' , ?AB=' F , 0; ' B>0' , =' . , 20' ; <' 1 < H2 , ?A:' 0 0A D' , 22' ; AB' U , @' U ; A' 8 * < B228 0' =B; , ?AY B ; 0:' , =' ; AB ?B' ; <' %B =, :' UA ?A' AB' B , ?AB=' < ' >D>0; ' 56' AB B' AB' <> =' >?AB; ' , U , ; D' A ' < ' , ' ?< B B ?B6' AB' < =B 0' < ' +, 0:' < ' UA ?A' H<; A' UB B' , ?; D:' 0BB B=' ; <' F B0? HB' ; A , ; ' < ; <0 , ' , =' , , D< , ' 0A<>2=' H<; A' HB' , ; ; , ? B=' $ >; ' ; AB' (B B , 2' , =' ; AB' 1 , 0A , 2' , D BB=' ; A , ; ' ; AB ' N< ; ' 0; B D; A' U , 0' <; ' < B' ; A , ' B <>DA' < ' < B' 0 BDB' , ; ' , ' ; B6' AB@' , D BB=' ; A , ; ' ; AB' =' < F0' 0A<>2=' > =B ; , B' ; AB' 2B , D>B ' < ' < ; <0 , :' , =' K' ; AB' ?< ; , D8' < ' ; AB' . , 2B ? , ' , @:' UA 2B' ; AB' 4; A' 0A<>2=' ?<EB ' ; AB0B' <FB , ; < 0' H@' BBF D' 8 * < B22' , =

T BB' ?AB; 8 0' % %(' 6' 5 (4:' , =' ; AB' = 0F , ; ?A' < ') , F<2B< 8 0' () . % < ' C>2@' : 6

;ABˢ ,;,2, 0ˢ >22@ˢB F2<@B=6ˢ >?AB;ˢ;AB B < Bˢ= BUˢA 0ˢ=B;,?AY B ;0ˢ 0<>;AU, =ˢ < ˢ %B =,ˢ, =ˢ;ABˢ F2, 0ˢ < ˢ;ABˢ BD B:ˢ A, = Dˢ<EB ˢ,22ˢ;A,;ˢ; ,?;ˢ;<ˢ 1,?=< ,2=6ˢ " < ˢ;A 0ˢ B ; 2Bˢ BD < ˢ,2< Bˢ?<>2=ˢ;ABˢ 1, 0A,2ˢ A,EBˢ B=ˢA 0ˢ?< F0:ˢ B ; ,2ˢ ,;,2< ,ˢHB Dˢ H, B :ˢ, =ˢ0<ˢ<EB > ˢH@ˢ 8*< B2280ˢ=B;,?AY B ;0ˢ;A,;ˢ ;ˢU,0ˢ F<00 H2Bˢ;<ˢ < ,DBˢ BB2@ˢU ;A ˢ ;0ˢH<> =06ˢ >?AB;ˢ > =B ;<< ˢ ;<ˢF <E =Bˢ < ˢA 0ˢ <U ˢ?< F0ˢ => Dˢ;ABˢ 0 BDBˢ< ˢ < ;<0,ˢH@ˢH D Dˢ>Fˢ0;< B0ˢ < ˢ , ,D<00,ˢ, =ˢ;ABˢ E,22B@ˢ< ˢ;ABˢ #H <:ˢ E ,ˢ 1BM> B R,6ˢ 1,?=< ,2=ˢ2B ;ˢA :ˢ B, UA 2B:ˢ;ABˢ UB, B0;ˢ< ˢA 0ˢ ;A BBˢ= E 0< 0:ˢ : ˢ) B,F<Y 2;, 0ˢ > =B ˢ+ D ,;B22 :ˢ UA<ˢ UB Bˢ;<ˢ B0?< ;ˢ;ABˢ0 BDB ; , ˢ < ˢ < ;<0,ˢ,2< Dˢ;ABˢ#H <:ˢUAB ˢ;ABˢ,>;> ˢ , 0ˢ ,=Bˢ;ABˢ EB ˢ ,E D,H2Bˢ < ˢ1BM> B R,ˢ;<ˢ;ABˢ0B,6

& A 2Bˢ >?AB;ˢU,0ˢ <E Dˢ0<>;AU, =ˢ, =ˢ , Dˢ B,=@ˢ< ˢ ;ABˢ0 BDB:ˢ;ABˢ * > Bˢ< ˢ , B ;> ˢB0;,H2 0AB=ˢA 0B2ˢU ;Aˢ AB,=ˢ M>, ;B 0ˢ,;ˢ B EB ,ˢ< ˢ;ABˢ $, ?B2< , %B =,ˢ<,=:ˢ, =ˢH D,=B0ˢ ,;ˢ %B =,:ˢ D , > ;:ˢ, =ˢ , BD,:ˢ,22ˢ ˢ;ABˢF2, 7ˢ ABˢU,0ˢ B,=@ˢ ;<ˢ ,22ˢ >F< ˢ 8*< B2280ˢ 2, ˢ ˢ;ABˢ ,;,2, 0ˢ 0A<>2=ˢ , Bˢ , @ˢ M ;;B F;ˢ ;<ˢ 0>??<> ˢ < ;<0,:ˢ H@ˢ , ?A Dˢ < ˢ , ,D< ,ˢ,2< Dˢ;ABˢ <,=0ˢF, ,22B2ˢ;<ˢ;ABˢ 60B,ˢ?<,0;6ˢ 1B, Y UA 2Bˢ ABˢA,=ˢ?< F2B;B2@ˢ 2<0;ˢ ;<>?Aˢ H<;Aˢ U ;Aˢ ;ABˢ D, 0< ˢ < ˢ$, ?B2< ,ˢ, =ˢU ;Aˢ $, ,D>,@ˢ=8 22 B 0ˢ ˢ;ABˢ F> =, 6ˢ A 0ˢ U,0ˢ;ABˢ BD>2,ˢ 0;,;Bˢ< ˢ;A DOˢ => Dˢ;ABˢ ,;,2,ˢU, 7ˢ < ˢ ˢ;ABˢ" B ?Aˢ2B ;ˢ=B;,?A B ;0ˢ;<ˢD>, =ˢ,ˢ2 Bˢ< ˢ?< > Y ?,;< :ˢ;AB@ˢ UB Bˢ E, ,H2@ˢ?>;ˢ< ˢH@ˢ;ABˢB B @7 UA 2B:ˢ ˢ ;AB@ˢ= =ˢ <;:ˢ;ABˢ <,=0ˢUB Bˢ H2<? B=ˢ, =ˢ <ˢ < ,;< ˢ?, Bˢ ;A <>DA6ˢ <ˢE D< <>0ˢUB Bˢ;ABˢ0< ,;B B0ˢ,;ˢ;A 0ˢ < B ;:ˢ;A,;ˢ 0 ,22ˢF, ; B0ˢ <E Dˢ < ˢ , BD,ˢ;<ˢ B EB ,:V F2,?B0ˢ< 2@ˢ ;UB2EBˢ 2B0ˢ,F, ;:ˢ, =ˢ ˢ;ABˢ ==2Bˢ< ˢ;ABˢ?, ;< B ;0ˢ< ˢ ;ABˢ4;Aˢ < F0:V UB Bˢ <;ˢ> BM>B ;2@ˢU,@2, =ˢ, =ˢ=B0; <@B=6ˢ 1,?=< ,2=:ˢ=B0F ;Bˢ A 0ˢ UB22 <U ˢA> , ;@:ˢU,0ˢ < ?B=ˢ ;<ˢ H> ˢE 22,DB0:ˢ, =ˢ0A<<;ˢ <,=0 =Bˢ,00,00 0ˢ?,>DA;ˢ B= A, =B=6ˢ Bˢ2,@ˢ ˢ;ABˢF<0 ; < ˢUA ?Aˢ ABˢA,=ˢ;, B ˢ>Fˢ< ˢ BF;B HB ˢ O Pˢ < ˢ;ABˢ D B,;B ˢF, ;ˢ< ˢ;A,;ˢ < ;Aˢ, =ˢ;ABˢ 0>??BB= Dˢ ?;<HB :ˢ?< ?B ; ,; Dˢ,;ˢ ;B E,20ˢ,ˢF, ;ˢ< ˢA 0ˢ < ?B0ˢ < ˢ, ˢ BWFB= ; < ˢ ;<ˢ;ABˢA 220:ˢUAB ˢ;ABˢ ,;,2, 0ˢF B00B=ˢA ˢ;<<ˢ ??<0B2@6ˢ ;ˢ;ABˢ?< B ?B B ;ˢ< ˢA 0ˢ 0<ℕ<> ˢ ˢ;ABˢF2, 0:ˢABˢ 0B ;ˢ BEB <2ˢU ;Aˢ, ˢ ;,2, ˢH D,=Bˢ;<ˢ?<22B?;ˢF <E 0< 0ˢ ˢ;ABˢ E,22B@ˢ< ˢ;ABˢ)<D>B ,ˢ+,22B B0,6ˢ A 0ˢ , =ˢ2B=ˢ ;<ˢ= B,= >2

1

2

3

Dollar of Ferdinand VII struck at Lima

Portuguese Cruzado Novo of the Regent João

Double Vintem of the Regent João (copper)

5

4

Gold Dollar of Charles IIII

7

6

Dollar of Charles IIII counter-marked with head of George III and current both in Spain and Great Britain

The 'Military Guinea' struck for the Peninsular Army in 1813

Dollar of Ferdinand VII struck at Mexico 1810

COINS CURRENT IN SPAIN AND PORTUGAL IN 1808–14

,E,D D' < ' ;AB' ?<> ; @ 0 =B:' H>;' BEB <2' B;> B=' U ;A' <' 0F< 2' , =' , @' U<> =B=6' B' A,=' F>0AB=' A 0' ,=E, ?B' ,0' , ' ,0' ,2, :' 0 0A D' ;AB' UA<2B' U,@:' , =' = E D' ;AB' 0< , ' ;B B0'HB < B' A :' H>;' ?<>2=' ,??< F2 0A' <;A D'0,EB' ;AB' H> D' < ' F<< ' E 22,DB0' BE,?>,;B=' H@' ;AB ' A,H ;, ;06 ' UBB ' 2,;B ' <;AB ' BWFB= ; < 0' 0?<> B=' ;AB' <> ;; ' 0 =B0' B,0;U, =:' U ;A' 2 ;;2B' < B' 0>??B00

1B, UA 2B:' ;A<>DA' 1,?=< ,2=' ,D B=' ;A,;' AB' U,0' <;' < 2@' F <;B?; D' ,?AB;80' < ;AB ' =, :' H>;' ,20<' ,;; ,?; D' ;AB' ,;;B ; < ' < ' 8 * < B22' ;<' A 0B2 :' ;AB' B ;B F 0 D' F, 0A' DB B ,2' A,=' ?< ; EB=' , ' > UB2?< B' 0> F 0B' < ' A 6' B' BU' ;A,;' AB' U,0' <;' 0; < D' B <>DA' ;<' DA;' ;AB' 4;A' < F0' ' ;AB' <FB ' B2=:' < ' BEB ' ;<' ,?B' ,?AB;' H@' , D' , <;AB ' ,;;B F;' ;<' B2 BEB' < ;<0, V UA ?A' F2,?B:' < ' ;AB' < B ;:' U,0' ' <' B= ,;B' =, DB 6' B' ;AB B < B' B0<2EB=' ;<' = ,U' 1,?=< ,2=' < ' A 0' F B0B ;' F<0 ; < :' H@' ,' H2<U' ,;' ;AB' ?< B ' < ' ,;,2< ,' UAB B' ;AB' " B ?A' UB B' UB, B0;6

AB' 1, 0A,2' ?< 0 =B B=' ;A,;' $, ,D>,@' =8 22 B 0' Ug0' FB Y B?;2@' 0, B' ' ;AB' < ;AB ' BD < ' UA ?A' AB' D, 0< B=:' 0 ?B' <' BD>2, ' F, 0A' < ?B' U,0' <U' ' , 0' ' ;A,;' = B?; < 6' 8 * < B22' B0<2EB=' ;<' > =B?B EB' A 6' %B,E D' ;AB' ;U<' = E 0 < 0' < ' H 0F<' , =' # <2B0' ;<' H2<? ' ;AB' <,=' < ' 1,?=< ,2=80' F<0;' ,;' B EB ,' ;<' $, ?B2< ,:' U ;A' < =B 0' ;<' B; B' ;<' , ,D< ,' ' A, =' F B00B=:' AB' < =B B=' ,' ;A =' = E 0 < :' ;A,;' < ' , F<' EB =B:' ;<' F BF, B' < ' ,' < ?B=' , ?A' ;<' ;AB' < ;A6' ;' ;AB' 0, B' ; B' ,' < ?B:' ?< 0 0; D' < ' ;AB' $; 0A' D,;B' = ' , =' ;AB' F, 0A' D,;B' 1 ' ?< E<@ D' ,' BU' ; , 0F< ;0' U ;A' ' B ' < ' H<, =' < ' = 0B H, ,; < :' 0, 2B=' < ' , ,Y D< ,:' < ' ,' =B0; ,; < ' UA ?A' U,0' BF;' 0B? B;' ;<' ;AB' 2,0;' < B ;6' AB' ; <<F0' UB B' > =B ' *<@2B:' ;AB' $; 0A' ?< Y 00 < B ' ' ,;,2< ,7' ,F;, ' ", B' < ' ;AB' = ' U,0' 0B < ' ,E,2' < ?B 6

8 * < B228' 0' , ?A' U,0' FB 2<>0' AB' A,=' ;<' F,00' ?2<0B' ;<' ;AB' < ;' < ' ;AB' D, 0< 0' < ' $, ?B2< ,:' <0;,2 ?A:' , =' (B < ,:' ;A 8<>DA' ,' <0;' = ?>2;' , =' <> ;, <>0' ?<> ; @:' U ;A<>;' D E D' , @' 0 D 0' < ' A 0' F B0B ?B7' < :' ' A 0' <EB B ;' UB B' = 0?<EB B=:' $, ,D>,@' =8 22 B 0' DA;' ?< ?B ; ,;B' A 0' 0?,;;B B=' H D,=B0:' , =' ? >0A' A ' H@' < 8?B' < ' > HB 06' AB' , ?A:' A<U '

' "< ' =B;, 20' 0BB' . ,?, :' E6' FF6 4 6

BEB :' E,0?, B='<>;' U ;A'?< F2B;B' 0>??B00:', ='<' BF;B HB' '
8*< B22'2,@' U ;A'P: ', ;@', ='O 'A< 0B',;'. = B ,0:'
0<>;A'<' (B < ,:' UA 2B' ;AB' , 8,2' < ?B' U,0' A<EB D' <;8
+,2, <0:' ;AB' B, B0;' F< ;'<' ;AB'?<,0;6 AB' <>DA' BD <'
HB;UBB' (B < ,' , =';AB' 0B,' U,0' ,;' ;A 0' < B ;'<??>F B='H@'
A,2' <>@B 80' = E 0<'<'; <<F0'<';AB' < B=B ,;<'<';AB'
A B:'> =B' ?AU, ;R V ;AB' BEB > 2>? @' DB B ,2' UA<0B' , B'
E,0?< B?;B=' E ;A' ;AB' = 0,0;B 0'<'$ >?A'', ='1, B0,' B'
A,=' E ;A' A '<>' EB,' H,;;,2<0'<';AB' ;A'I A,2; % FFBJ'
, =' P;A' I ?A E, ;RH> D &,2=B? B>00J' BD B ;0:', ='
0M>,=<'<'?> ,00 B 0C,'<?B' EA?A:'<E D';<';AB'0?2 B00'
<';AB',>;>' 0B,0<:'=='<;', <>;';<' >?A'<B';A,
:' B'' ,226' $>;' AB' E,0' 0<??<0B';<' (B < ,' EAB B'
2,@' <>@B 80'<;AB';U<' BD B ;0:', ='0< B'" B ?A'; <<F0:'
;A,;' AB' U,0' <;' ?< 0 =B B=' ', @=, DB'H@' A 0' 0>FB < 06'
?A E, ;R80' , ' =>;@' E,0' ;<' F BEB ;', @' ?< > ?,;<'
HB;UBB';AB'0< ,;B B0'<';AB' 2, =', ='; AB'? > 0B 0' EA?A'UB B'
,2U,@0'F,00 D'>F', ='=< E';AB'?<,0;6 + <E< B='H@',' B?B ;'
, =', ;' $,D> :'<' BF;B HB' :' EAB B', ' # D2 0A'2, = D'
F, ;@' A,=' 0;< B='<B'<' A 0' ?<,0;' H,;;B B0:', ='?,F;> B='
;AB' D, 0<'<'' B :' ?A E, ;R' A,='N>0;' 0; B D;AB B=',22'
A 0' F<0;0',2< D';AB' 0A< B6' B' A,='<2@' 4 ' B',;' A 0' AB,='
M>, ;B 0',;' %,' $ 0F,27' ;AB' B0;' EB B = 0FB 0B='HB;UBB' $,D> :'
,' "B2 >:'+,2, <0:', ='AB'?< B?; D' F<0;',;', 2< NB6'
;AB' <D'<';AB' <> ;BB ;A' AB' E,0' 0; ? B' E;A' A< <'
EAB'A 0'<>;F<0;0' < B='A ';A,;';AB@'A,='HBB'= EB'' H@'
F, 0A' , ; @', ='?,E,2 @' '<EB EAB2 D'<?B6' B' 0B ;'
< =B 0:';<<'2,;B:'<'A 0';<<F0'<';AB'?<,0;';<'?< ?B ; ,;B:', ='
F BF, B=';<' ,22' H,?'<'(B < ,' E ;A' A 0' EA<2B' <?B6' $>;' A 0'
B00B DB'A,='A, =2@' D< B' UAB' AB' E,0',;;,? B='H@' 8*< B22:'
UA<'= <EB' A ;<';AB' =B B 0 H2B'?,0;2B'<'%,' $ 0F,2:' UA?A'
U,0'?< , =B='H@',' B DAH<> D' A 22', ='; AB'?A> ?A';< EB'
<';AB' E 22,DB6' ;B'2<0 D' 0< B' B'0A<;'=< E'<';AB0B'
F< ;0'<'E, ;,DB:' ?AU, ;R' 0> B =B B=',;' DA; ,22:' EAB';AB'
F, , =0' EB8B' F BF, D';<' 0;<' A 0' B >DB6' 0' =B B ?B'
?, <;' A,EB' HBB' EB @' =B0FB ,;B:',0' AB' A,='2<0;'<2@'<B'<?B'
, =' <>' B' 22B=:', ='; A BB'< ?B 0', ='0 W;BB' B' E<> =B=6

8' BB' <26 6 F6' 6 ' BB';A 0' E<26' F6' 5 6
T' 2@',H<>;' B DA;BB' 2B0' = 0;, ;6

$>; ;A 0 U,0 < 2@ F, ;< ;AB = 0,0;B U2 ?A HB B22 ;AB (B , H D,=B ;A,;=,@6 H@ ,?, B >2 ; D< ;AB ,;;,? 0 *<@2B , =" , B 0;< B= +,2, <0 U ;A ;AB 2, = D < ?B ,; ;AB 0, B < B ; ;A,; %, $ 0F,2 U,0 HB D ,;;,? B=: UA 2B <2< B2"2B B0: U ;A ,=B;,?A B ;< 8 *< B2280 2, =; <<F0: 0> F 0B;2 , "B2 >: , = <2< B2 2=B, U ;A , <;AB ?>;< ;AB?< F, B0 ,; ,2< NB6 ,22 ;AB F, , =0 ?,F;> B= < ;A,;=,@ < B DB B ,2: ;U< ?<2< B20: ;@ 0 W < ?B 0: , = : , , = 2B: U ;A 0BEB ;BB D> 06 ?AU, ;R80 H D,=B U,0 ,H0<2>;B2@ =B0; <@B=7 < 2@ , BU 0; ,DD2B 0 B,?AB= (B < , < UA ?A < AB2F A,= HBB 0B ;: HB?,>0B 8 *< B22 A,= ;> B= 2<<0B ,22 ;AB 0< ,;B B0 < ;AB BD < ;< =B < 0; ,;B ,D, 0; ;AB F2,?B

& ;A<>; U, ; D < <>@B , = $, ,D>,@ =8 9 22 B ;< ,00B H2B ;AB < ?B0: 8 *< B22 =BF, ;B= < ;AB 0?B B < A 0 BWF2< ;0 U ;A<>; =B2,@6 B A 0B2 : A,E D B?B EB= , 0BEB B U<> = ;AB <<;: B H, B= U ;A ;AB F 0< B 80 < H<, = ", B80 0A F0 , = B;> B= ;< , ,D< ,6 , F<EB =B: U ;A ;AB 2, = < ?B: B; 8B= A,0; 2@ F,0; (B < , ;< ;AB <> Y ; , 0 < ;AB < ;A: B;<< +>@BB =, : HB, ; >F ;AB <>;F<0;0 < ;AB " B ?A D, 0< < 1 < ;2<> 0 < ;AB < ; B < B =,D B: , = , 0B= 0< B ?< ; H>; < 0 < ;AB <;AB 0 =B < ;AB +@ B BB06 " < ;AB ?B AB =B0?B =B= ;AB BD B: , = B0;,H2 0AB= A 0B2 , ; , =< , , = ,2, : ,? D 1 ,?=< ,2=80 < ;AB 2, 6

< ;A< <>DA2@ A,= ;AB , H<=@ < ;AB ;A < F0 2<0; ;<>?A U ;A ;AB ; <<F0 2B ; HBA = , ;(B < , , = ;AB F> =, : ;A, ;AB BU0 < ;AB = 0,0;B < % , $ 0F,2 < 2@ B,?AB= 1,?=< ,2=: E , " , ?B , = , ,D<00, : < B ;A, , < ; DA; , ;B ; A,= A,FFB B=6 ; ,2, B= A < ;AB 0, B;@ < ;AB < ;A: H>; = = <; 0> ?B ;< = ,U A ,U,@ < >?AB; : ,0 8 *< B22 A,= A<FB=6 AB BU0 ;A, ; ;AB F, 0A , = D = E 0 < A,= = 0,FFB, B= < ;AB B DAH<> A<<= < (B < , B ?<> ,DB= A ;< B , A 0 F B0B ; F<0 ; < : UA ?A ,2< B ,=B ;AB 0 BDB < < ;<0, F<00 H2B6 + B0B ;2@ AB U,0 < B= ;A, ; , ?< 0 =B ,H2B < ?B A,= ,FFB, B= A 0 <U 0FAB B < <FB ,; < 0 V ;A 0 HB D ;AB 0, B = E 0 < < , F<EB =B UA ?A A,= =< B ,22 ;AB 0?A B ;AB < ;A6 B ;AB B < B , ?AB=

* B HB0; , ,; EB < ?AU, ;R80 = 0,0;B ,@ HB <> = ;AB = , @ < ;AB % FFB $? BH> D < ?B $, A,>0B : < B < ;AB F 0< B 0: FF6 6

,0FB?; ;A, ; ; A, = 0A<U ;AB 0; =,@0 < BF;B HB 6 ; A,0 HBB ;AB U< ; < 2 ;, @? ; ?0 ;< ;A <U ;AB H2, B < ;AB 2<0; ;A BB < ;A0 < 1 ,?=< ,2= $>; ;A 0 0BB 0 > , 6 ; 0 ; >B ;A, ; AB U,0 ,H0B ; < ;AB F<0; UA ?A AB A, = F < 0B= ;< A<2=: < ;AB F <;B?; < < >?AB;80 B, : <) <EB HB @a ;< * B?B HB 6 $>; UA@ A, = 0< 2 ;;2B HBB =< B ;< < U, = ;AB 0 BDB < < ;<0, => D ;AB ; B < BF;B HB O ;<) <EB HB O V ;U< UA<2B < ;A0 V UA 2B ;AB 1 , 0A, 2 U,0 ;AB ?<EB , ;B= F<0 ; < : , = ,?;>,22@ ?, @ D <>; A 0 F < 0B ;< ?< ; , ;AB ,;,2, 0: , = 2B,EB >?AB;80 A, =0 BB < ;AB ,?;>, 2 F <0B?>; < < ;AB F <NB?;B= 0 BDB Z AB ?< , =B < ;AB @ < , D< A, = HBB D EB ;U< < ;AB HB0; ?, F, D D < ;A0 < ;AB @B, V BF;B HB , = ?;<HB V , = A, = < B B @ , H<>; A 0,EB ;AB BEB > 2>? @ . ,2B ? , , @: ;AB 2<?, 2 0< ,;B B0 < ;AB %<UB # H <: , = ;AB 0?, ;;B B= H, =0 < . 22,?, F, ;AB A 220 < ' FFB , D< 6 ; U,0 < 2@ 0 W;@ 2B0 < A 0 H,0B , ; 1 BM> B R, : UAB B A 0 0 BDB ; , A, = HBB ?<22B?;B= < ;A0 HB < B: ;< ;AB U,220 < < ;<0, : , = AB A, = H <>DA; >F A 0 B2= , @ HB < B ;A, ; F2,?B ,0 B, 2@ ,0 >D>0;6) < =<>H; ;AB ?<> ; @ HB;UBB 1 BM> B R, , = < ;<0, 0 <>DA: , = ;0 <,=0 BWB? ,H2B: UA 2B U,;B ; , 0F< ; ,2< D ;AB # H < U,0 B =B B= < B = ?>2; ;A, >0>, 2 H@ , ,;AB = @ , >;> : UA ?A BF; ;AB EB 2<U6 $>; ;UB ;@ 0 W AB,E@ 0 BDB D> 0 UB B D<; =<U ; ;< / B ; , : < 2@ ;B 2B0 < < ;<0, : ,0 B, 2@ ,0 BF;B HB : => D , 2>? @ 2<<=: UA 2B , ?< 0 =B ,H2B > HB < B UB B F>0AB= ; < ;AB < ; => D ;AB 0, B < ;A: H@ ;AB 2, = <>;B: < B= H@ >?AB;80 BU 2 ;, @ <,= < ,0FB ; < 1 < ,6 ; 0BB 0: ;AB B < B: ;A, ; >?AB;80 ,?; E ;@ BF;B HB , = ?;<HB ?, HB BWF2, B= B ;AB H@ 2,@ D H2, B < 1 ,?=< ,2=: < H@ BW,DDB ,; D ;AB = ?>2; B0 < ; , 0F< ;6 : ,0 AB U <;B 6 A 0B2 : K) <; B ?< F0 =8, BB 0B ; <>E, ; B ?A, B 0> 2B H,0 #H B: 0, 0 F<>E< ,D : B; 0< ?AB 8,E, ; =8B0F< M>B =, 0 > B ? >B =8B,> B; =, 0 7 0B?<> 0 =B0 ? ?< 0; , ?B0 AB U,0 A 0B2 B0F< 0 H2B < A 0 , 2> B: B ;AB < <EB ?, >; < < HB?, >0B AB A, = > =B ; , B , ; ; ,0 HB@< = A 0K B, 06 AB B,2 ?, >0B < A 0 ;U< < ;A08 =B2, @ E,0 ;AB E D< 8<>0 , ?; < < ;AB

BB B0FB? ,22@) , F B : 6 556

>?2 B;: % ' %(6 6

% & " O O % O

V " I K& ! "@ %&$

> < 2@ B , 0 ;A , ; UB 0A<>2= =B , 2 0A< ;2@ U ;A ;AB A DAB F<2 ; ?0 < F , => D ;AB 2 , 0 ; < ;A0 < V ;AB ; <>H2B0 < 9 D C<0BFA: , = ;AB ?< F2 ? , ; < 0 ? , >0B= H@ ;AB BB; D < ;AB < ;B0 , ; , = R6

;AB D <U D ?; < HB;UBB ;AB 9 D , = ;AB ?< , =B 0 < ;AB K 2 ; , @ D<EB B ;0 ? B , ;B= H@ ;AB # FB < " BH >, @: UB A , EB , 2 B , =@ 0F< B A C<0BFA = = UB22 ;< HB , D @ UAB A 0 = 0F , ;?AB0 ;< , , D<00 , < $, 8?B2< , UB B =B2 HB , ;B2@ = 0 BD , =B= H@ A 0 H <;AB 0 0FB? , 2 < =B 06 $>;; A D0 HB? , B U< 0B: UAB AB U , 0 <; B B2@ D < B=: H>;; <FB 2@ ?< ;B B=6 BU BW , F2B0 , @ 0> ?B6 ;AB B , 2@ 0> B , H D , =B 0B ; <>;; H@ 1 , 0A , 2) B@ , =B= ;AB F <E ?B < E 2 , : UA ?A U , 0 <; ??>=B= , @ < ;AB 2 ; , @ D<EB B ;0: , 0B= B > 0 ; < 0 ;AB B: , = UA , ; U , 0 0; 22 < B 0>2; D V 0B RB= , = ?, B= < ;AB ; B , 0> B ;AB < ?B0 < ;AB ? E 2 ;B = , ; DB B , 2 < ;AB F <E ?B_6 C<0BFA U <;B ; < + , 0 ;A , ; K ;AB # FB < ?, <; HB =B0 <>0 ;A , ; A 0 <U H <;AB V A<UBEB > U< ;A@ V 0A<>2= HB <FB 2@ A> 2 , ;B= , = 0>2;B=7 ;A , ; AB , 0 B= < N>0; ?B: , = , H0; , B= < , @ > ;AB ?< B ; 8 6) , F<2B< BF2 B= H@ F2 , ? D E 2 , ;AB H2<? < F <E ?B0 , 22<; ;B= ; < ;AB @ < + < ;>D , 2: , = U ;AY = BU ; < ;AB ; B < ;AB 9 D8 0 , >; A< ;@6 ; U , 0 0<< , ;B ; A , ; AB ? B , ;B= 9B22B , 8 0 BU K 2 ; , @ D<EB B ; 8 < . , 22 , =<2 =: ;A>0 ; , D , <;AB BD < < > =B ;AB = B?; , >; A< ;@ < C<0BFA6 < B < ;A0 2 , ;B 9B22B , , 00B ;B= ;AB ?< F2B;B =BFB =B ?B < A 0 E ?B <@ , 2; @: H@ ? , >0 D ;AB

T BB FF6 , = P6 BB F6 O 6

C<0BFA ; <) , F<2B< 6 *>?, 00B8 0 %() . % . : D ? (%)# E 6 4 56 B # FB < D , EB E 2 , H , ? ; < ;AB 9 D BF;B HB : 0BB) , F6 %() . % WW 6 P6

' ;A 0' A> 2 , ; D' F<0 ; < 6' ?B' ;AB' @' < ' =, 2>0 ,' A, 0' HBB ' ; , B ' < ' B:' UA, ;', ' ' Z' AB' , , DB ' < ' ;AB' A<0F ; , 20' , =' , D, R B0' < ' 1 , = =:' ;AB' AB, =' N, 2B ' < ' ;AB' ?B ; , 2' =BF<;' < ' F 0< B 0' Q8' C<0BFA' ;AB ' 0; , ;B0' A 0' ?< = ; < 06' 'AB' 0' , 22<UB=' I J' ;<' A, EB' ,' B, 2' ?< ; <2' <EB ' ;AB' UA<2B' , @7' I J' ;<' 0B =' H, ? ' ;<' " , ?B' < ?B 0:' < ' UA, ;BEB ' , :' <;< <>02@' D> 2;@' < ' , 2, = 0; , ; < 7' I J' ;<' B, 00> B' A 0' F, 0A' F, ; 0, 0' , 0' ;<' > <> 0' ?> B ;' ?< ?B D' A 0' <U ' < ?B=' , H= ?, ; < ' , =' ;AB' = 0 B HB B ;' < ' ;AB' < , ?A@' 7' IOJ' ;<' 00>B' UA, ;' F <?2, Y , ; < 0' AB' F2B, 0B0' ;<' A 0' 0>HNB?; 0:' U ;A<>;' HB D' F2, ?B=' > =B ' ,' 0< ;' < ' ?B 0< 8OA F:' AB' U 22' B; , ' A 0' ? <U :' , =' F2B=DB' A Y 0B2 ' ;<' B=>?B' , 22' F, :' , =' K' , B' ;AB' ?<> ; @' , 0' F < ; , H2B' ;<' ;AB' ;B B0; 0' < ' " , ?B' , 0' ;' 0' <U' =B; B ; , 26' ' <;:' AB' >0;' ?< 0 =B ' ;AB' M>B0; < ' < ' T?; D' , ? <00' ;AB' +@ B BB0' , =' 0> B =B D' A 0' ? <U ' H

) , F<2B< ' ?<>2=' <;' D EB' , @' 0>?A' F < 0B0:' , =' < ' D<<=' B, 0< 06' AB' DA;2@' = 0; >0; B=' A 0' H <;AB 8O' 2 ; , @' , H 2 ;@:' , =' BU' ;A, ; V UA, ;BEB ' U, 0' ;AB' ; ;2B' D EB ' ;<' C<0BFA V B ' 2 B' <>2;' < ' 1 , 00B ,' U<>2=' = 0 BD, =' A 0' < =B 06' FF, B ;2@' AB' ?< 0 =B B=' ;A, ;' , ' ?< 2 ?;' < ' , >; A< ; B0' ' F, :' 0>?A' , 0' A, =' HBB ' BW 0; D' < ' ;AB' 2, 0;' 0 W' < ;A0:' U, 0' , ;' 2B, 0;' HB; ;B ' ;A, ' ;AB' ?< ?B ; , ; < ' < ' F<UB ' ' ;AB' A, =0' < ' < B' = B B ;' ?< , =B ?A B 6' ;' 0' =<>H; >2' UAB; AB ' AB' = =' <;' B ' ' A 0' ?< ?2>0 < 6' 2 <0;' , @; A D' U, 0' HB; ;B ' ;A, ' ;AB' BW 0; D' , , ?A@:' ;B FB B=' H@' < =? 0:' 0 W' UBB 0' 2, ;B:' < ' +, 06' $>;' ,' 0B?< =:' , =' ,' < B' , ; , 2:' <HNB?; < ' ;<' D , ; D' C<0BFA80?< = ; < 0' U, 0' ; A , ;' ; AB' K' > <> 0' ?> B ;' ?< ?B D' ;AB' = 0 B HB B ;' < ' ;AB' F, 0A' < , ?A@' 8' UB B' , H0<2>; B2@' ; >B6') , F<2B< ' U, 0' , ;' ; A 0' < B ;' , ;' ;AB' EB @' AB DA;' < ' A 0' U 2=' ? , RB' < ' , == D' , 2 B ' , =' AB; B <DB B<>0' F <E ?B0' ;<' ;AB' " B ?A' # F B:' ' ;AB' 0>FF<0B=' ;B B0;' < ' ;AB' < ; B ; , 2' @0; B 6' ;' U, 0' ' ' ;A , ;' AB' =B?2, B=' <22, =' , =' ;AB' . , 2, 0:' , H> D' , =' $ B B :' 2=B H> D' , =' * , 2 , ; , :' ;BD , 2' F, ;0' < ' A 0' =< < 06' =') < ;AB ' F, ' U, 0' =B0; B=' ;<' 0> B ' ;AB' 0, B' , ;B6' 1 ,' , =' <E ,:' # <2B0' , =' 1 , 0<:' UB B' ;<' U, B' 0< B' < D' ;<' =' ;AB 0B2EB0' " B ?A' 0>HNB?; 0Q' ' ?;<HB ' ' ;AB' # FB < ' U <;B' ;<' $B ;A B G' K ! <>' U 22' < ' (B B , 2' , , B22 :' ' 0; ?;' ?< =B ?B:' ;A, ;'

= = L " ! & # & " 8 ! $ & K % @ " " O & " >

;AB =B , 9 , < ;AB $? , A 220 UB B ;< = 0?<EB ; A , ; ;AB@ UB B ,0; 2 , 0 0 1 , = = 0 BD, = < , ; < , 2 BB2 D ?<>2= D< < > ;AB 6

2B;;B ;< ;AB " B ?A , H,00,=< , ; 1 , = = BWF2, B= , ; >?A D B, ;B 2B D;A ;AB # FB < 80 B,0< 0 < H B, D ;AB <, ;A ;A , ; AB A, = 0U< ; ;< A 0 H <;AB , ; $, @< B: UAB AB , B= A 9 D < F, 6 K .2 B ;AB F < 0B U,0 , =B: 0 1 , NBO;@ A, = 0>FF<0B= ;A , ; AB A, = ,22 B= ;< A 0 ?, >0B ;AB , N< ;@ < ;AB F, 0A , ; < 6 A 0 A,0 F <EB= <; ;< HB ;AB ?, 0B 7 ;AB UA<2B FB<F2B ;<< , 0: ;AB BU D A, = ;< 2@ < 1 , = =: , = U,0 < 2@ BO;< B= H@ " B ?A H, @< B;06 ?B ;AB AB A,0 A, =2@ ,22 B= , B? > ; ;< A 0 ?, >0B7 ; 0 <; ;AB 9 D80 <U 2BE BO ;A , ; A, EB <>DA; ;AB BHB20 6 ; 0 ;AB O : " B ?A 0B ; , ? <00 ;AB +@ B BB0 UA< A, EB ?< M>B B= BEB @ F <E ?B6 AB B < B , 22 ;AB0B BD < 0 HB2< D <; ;< ;AB 9 D: H>; ;< ;AB # FB < : H@ F2, DA; < ?< M>BO;6 B ;B =0: < ;A 0 B,0< : ;< BD, = ;AB B, ;@ < $, @< B ,0 >227 ; A,0 BEB HBB , ; B= H@ ;AB F, 0A , ; < 6 B < 2@ ?A, ?B B , 0 ;< ;AB 9 DG 2B; A F BE, 2 >F< ;AB BU2@ ,00B H2B= < ;BO , ; , = R ;< , ? <U2B=DB A ,0 ;AB 0<EB B D : , = ; < H B, U ;A # D2, =6 ;A, ; ?, HB =< B: ;AB # FB < ,@ BEB ; ;< A 0 80; ;B ; < 0: , = , ; @ ;AB B, ;@ < $, @< B: BW?BF; ;A , ; AB >0; 0 0; < , B?; ?, ; < < < ; B 0 0> ? B ; ; <D EB A ?B ; , = 0FB 0, H2B F<0 ; < 0 c 8 V F BO> , H2@ , BH, 0; , : + , FB2> , : " D>B , 0: <0, 0: e?6

AB B B 0; > <> < A 0 H <;AB 80 ;B ; < 0: ; , 0 ; ;B= H@ 2 B , , , = ;AB * > B < , ; , "B: A 0 , H,00,=< 0 < = , @ , = BW; , < = , @ , ; + , 0: = <EB C<0BFA ; <= BOF, 6 7 AB F, 0A , ; < :8 AB U <; B K 0 < B ?< F, ?; ; ;0 <F < 0: ;0 F BN>= ?BO: ;0 , ; < , 2 BD<; 0 : ;A, , @ <;AB FB<F2B < # > <FB6 AB B , B < , ;A<2 ?0 , = + <;BO; , ;0 AB B: < BU , = <2= F, , =07 , = ;AB@ U 22 , 22 0> B ; AB 0B2EB0 ; < HB ABU F B?BO , ; AB ; A, , 22 <U ; AB B, 2 ; < HB = 0 B HB B=6 & A , ; U<>2= ;AB A, H ; , ;0 < ; AB ?<> ; BO <> = %< =< 0, @ ;AB@ UB B B , ?B= U ;A HB D =B?2, B= < 2< DB # D2 0A P & A , ; U<>2= + <EB , 20 < %, D>B=<? , 0 0, @ ;AB@ UB B ;<2=

4 "26* -* * #2 * -0 2 A2002. * 2 2. . " "*/(S(

T C<0BFA ; <;AB `>BB < F, : ?;6 6 *>?, 00B: %() . %
E 6 6

9) (C #+) * #

;A, ; ;AB@ UB B ;< ?B,0B ;< HB " B ?A B Z 1 @ < 2@ ?A, ?B AB B 0 ;< HB ,>;A< RB= ;< , <> ?B ;A, ; ;AB F < 0B ;A, ; F, 0A<>2= <; HB = 0 B HB B= U 22 HB BF;6 ;A, ; 0 D , ;B=: , = ;AB DB B ,20 UA< A, EB 0HBA, EB= , B B?, 22B= ;< " , ?B: , 22 ,@ HB BF, B=6 <;: ;AB < 2@ A< <> , H2B ?<> 0B < B 0 ;< B; B ;< F E, ;B 2 B: ,0 @ ?< 0? B ?B H =0 B: , = A< <> =B , =068) <EB HB : , ;B A, E D B?B EB= < B < ,2 BU0 < ;AB # FB < 80 ;B ; < 0 < A 0 B E<@0: C<0BFA =B?2, B= ;A, ; ;AB = B U,0 ?, 0;6 AB U<>2= B;> ;< A 0 ?, 0;2B < 1 < ;B < ; , B: < ;< , @ <;AB F <E ? ,2 ,H<=B " , ?B ;A, ; AB ?<>2= , < = ;< F> ?A, 0B: ,0 0<< ,0 A 0 H <;AB 80 B0<2EB U,0 , =B F>H2 ?6

! B; ;AB ? 0 0 BEB ?, B ;< , AB, =6 AB , BW, ; < < ;AB #H < F <E ?B0 U,0 BEB F>H2 0AB=: ;A<>DA F E, ;B ,00> , ?B0 < ;AB FB = D , ;B UB B 2, = HB < B ;AB F, 0A 0;B 0 , = ;AB 9 D6 . A, ; ?, >0B= ;AB # FB < ; < AB0 ; , ;B: UAB , 22 U,0 F BF, B= P AB , 0UB , @ HB <> = A 0 = 0F, ;?A ;< % , < B0; <) <EB HB 4 6 K BB= A, =2@ U, @<>:8 AB U ;B0: K ;A, ; ;AB0B 0 >, ; < 0 I;AB >2; , ;> ;< ;AB 9 DJ , B ;< HB , =B < 2@ < ?< = ; < ;A, ; ;AB " B ?A , @ A,0 B ;B B= % 0H< : , = ;A, ; ;AB # D2 0A A, EB ; , B ; < ;AB 0A F068 = , D, : K AB # FB < 0 , ?; D 0 ?B ;@6 B, 2 ;@ ;AB ?, F;> B < % 0H< : , = , < B < ;AB ?, H B; < 1 , = = : DA; F<00 H2@ =B? =B ;AB BHB20 ;< ; B, ;6 0 1 , NB0; @ DA; ?< 0B ; : e?6: e?68 ; U,0 ;AB % B0 < < R8B0 . B= , 0 UA ?A 0, EB= 9 D C<0BFA < , H= ?, ; < , = F, < = 0 B HB Y B ;6 AB BE, ?>, ; < < +< ;>D, 2 H@ & B22 D; < U,0 ;AB = 0FB 0, H2B F B2 , @ ;< ;AB ?, @ D <>; < ;AB D B, ; , BW, ; < 0?AB B6 ;0 ?< F2B; < U,0 =B B B= ; 22 ;AB < <>0 0 2B ?B < 1 , 00B , 0A<>2= HB B =B= H@ , ; > FA, ; = 0F, ;?A 6F <?2, D ;AB ?, F;> B < % 0H< 6 ?B ;A, ; = 0F, ;?A BEB ?, B:) , F<2B< BF; F<0; F< D A 0 >2; , ;> 6 AB <22<UB= ;AB BU0: =B2 EB B= , ; + , 0 H@ " <@ <) <EB HB : 0A<U D ;A, ; 1 , 00B , A, = HBB H <>DA; ; <, 0; , =0; 226 #EB ;AB ;AB # FB < 80 F2, U,0 BF; H, ? : <; , H, =< B=6 ; U,0 <; ; 22 ;AB @ < +< ;>D, 2 A, = B?< 2B= =B0F, , = = 0, , @ ;< ;AB H, 0 < ;AB <, ; A, ;) , F<2B< , H, =< B= A 0 ?AB 0AB= 0?AB B: , = ?< 0B ;B= ;< ; B, ; U ;A A 0 H <;AB < B, 0< , H2B ;B 06 $>; C<0BFA80 E 0 ; ;< + , 0 ;AB 0F D < , =

;0' ?< 0B?N2 B BB0' HB2< D' ;<' , <;AB ' ?A,F;B ' < ' ;A 0' A 0;< @6'
;' >0;' 0> 2 ?B' AB B' ;<' F< ;' <>;' ;A, ;' AB' 0FB ;' ,22' ;AB' U ;B ' < '
' ' ,' 0;, ;B' < ' B ;,2' , D> 0A:' BWFB?; D' BEB @' =,@' ;<' AB'
< ?B=' ;<' F>H2 0A' A 0' ,H= ?,; < ' , =:' B, UA 2B:' 2 E D' ,' 2 B'
< ' 0A ;0' , =' U< B0 V 0B22 D' A 0' 2,0;' 0 2EB ' F2,;B' ;<' BB=' A 0'
?<> ; B _0' :' , =' BW?A, D D' , ' B =2B00' ?< B0F< =B ??' < ' B < Y
0; , ?B0' , =' 0 >,; < 0' U ;A' <>2;' , =' ;AB' ?< , =B 0' < '
;AB' K 2 ;, @' D<EB B ;0@' < ' ;AB') < ; A # E B ' < ' ;AB'
2 ;, @' F< ;' < ' E BU' AB' = =' <;' ?< 0 =B ' A 0B2 ' 0, B7' ;AB'
FB? ,=<' , =' <;AB ' D>B 22B <' ?A B 0' ?, B=' ;AB ' ?> 0 < 0'
>F' ;<' ;AB' EB @' D,;B0' < ' 1 ,= =' 7' , =' %,' 1, ?A,:' < ' UA ?A:'
H@' ;AB' # FB < 80' < =B B:' >?A' ?,E,2 @' A,=' HBB ' U ;A= ,U '
< ' ;AB' HB B ;' < ' <>2;' T: U,0' BM>B ;2@' , =B=' H@' =B;,?A B ;0'
< ' $2, B80' @' < ' 1 > ? ,6' K' ' ?A,M>B' 0;, ;' =>' N<> ' B;' =B'
2,' > ;:8' U <;B' ;AB' > A,FF@' 0<EB B D :' K'NB' 0> 0' BWF<0B' ,' < ;B '
,' ?ABE 2' F<> ' =B B = B' ,' E B' ?< ; B' 2B0' H, =B0' BW,0FB BB0'
=B0' 0> DB0:' M> ' B ;<> B ;' 1 ,= =6 ?B;;B' E 22B' B0;' ,>W' ,E, ;'
F<0;B0

1B, UA 2B:' ;AB' <;AB ' D<EB B ;' UA ?A' ?2, B=' ;<' HB' ;AB'
2BD,2' BF B0B ;,; EB' < ' F, 0A' ,; < ,2 ;@' U,0' BEB ' < B' ; >2@'
K' ,>W' ,E, ; F<0;B068' AB' < ;B0' A,=' ,00B H2B=' ,;' ,= R:' UAB B'
;AB' H<< D' < ' ;AB' " B ?A' ?, < ' U,0' FB FB;>,22@' AB, =:' , =
UAB B' , ' <??,0 < ,2' 0AB22' < ' . 22, ; <@0@' ?B2BH ,;B=' < ;, 0'
U<>2=' F2> F' A, 2B002@' ;<' ;AB' 0, =' < ' ;AB' +B 0>2,' < '
;AB' <>;0 ;0' < ' ;AB' ;<U ' ;0B2 6' AB' < ;B0' A,=' <FB B=' ;0'
0B00 < 0' < ' BF;B HB ' O:' ;A<>DA' 2B00' ;A, ' A,2 ' ;0' B HB 0'
A,=' ,00B H2B=6' AB' = ?>2;@' < ' ?<22B?; D' ;AB ' A,=' HBB '
EB @' D B,;:' 0 ?B' ,22' A,=' ;<K, EB' H@' 0B,:' , =' , @' A,=' ;<' ?< B'
< ' BD < 0' EB @' B <;B:' 0>?A' ,0' 0;> ,0:' (,2 ? ,:' < ' ,;,Y
2< ,6' AB' ,00B H2@' ?<>2=' <;' HB' ?,22B=' 0,; 0 ,?;< @' < ' BF B

T BB' 2 0' 2B;;B 0' ;<' 2 0' U B' ' * B?B HB ' ' , =' C, >, @' :',H<>;'
H 0' H <;AB 80 K ,>E, 0B0' = 0F<0 ; < 0' ,' < ' BD, =68

^ B' U ;B0' ;A,;' ,;' 2 0' <0;' 0F2B = =' ;,;B' H, M>B;0' <;A D' H>;' ?A ,'
0' <U' ;<' HB' 0BB ' < ' A 0' ;,H2B6

^ AB' M>B0; < ' < ' ;AB' < 0>20' , =' <>2;' I B ; < B=' ' , ' B, 2 B '
?A,F;B J' ? <F0' >F' ,D, ' ' C<0BFA' ;<' $B ;A B :') <E6' 6

T) ,F<2B< ' ;<' $B ;A B :' ?;6' O:' < =B 0' * DB< 80' H D,=B' < '%,A<>00,@B80'
= ,D<< 0' ;<' ? <00' ;AB' B ,' 1< B ,:' ;A>0' 2B,E D' ;AB' D' < 2@' <> '
BD B ;0' < ' " B ?A' ?,E,2 @' ') BU' ,0; 2B6

' * >?,00B:' ;<UB0F< , ?;8:' E 6 F6' (6

0B ;,; EB6' AB' 0?AB B' = ,U ' >F' < ' ;0' B2B?; < ' H@' ;AB' ?< Y 00 < ' ;A,;' A,=' 0,;' ' ;AB' F B?B= D' U ;B ' U,0' ?< Y F2 ?,;B=6' AB B' U,0' ;<' HB' ,' =BF>;@' < ' BEB @' : ' 0<>20' ;A <>DA<>;' F, 1' H>;' ;AB' < ' < ' 0B2B?; < ' U,0' = B?;6 ;AB' E 22,DB0' ?A<0B' B,?A' < B' F , @' B2B?;< 1' ;AB' F , @' B2B?;< 0' B;' ,;' ;AB' ?A B ' ;<U ' < ' ;AB' = 0; ?;' ;<' ?A<<0B' ,' 0B?< =' H<=@' < ' 0B?< =, @' B2B?;< 07' ;AB' 0B?< =, @' B2B?;< 0' ?A<0B' ,' ,2' ?< ;;BB' < ' ;AB' UA<2B' F <E ?B' S?: ' ') 2 3' %3% ' 3' , =' ;AB0B' 2,0;:' , =B=' H@' ;AB' (<EB < :' ?AH 0A<F:' , =' ;B =, ;' < ' ;AB' F <E ?B:' < ,;B=' ;AB' =BF>; B06' $>;' ;A 0' ?< F2 ?,;B=' 0@0;B ' ?<>2=' < 2@' U< ' ' ;AB' BD < 0' UA ?A' UB B' ' ;AB' A, =0' < ' ;AB' F,; <;06' 2@' .,2B ? ,:' 1 > ? ,:' #0; B ,=> ,:' ;AB' $,2B, ?' 02B0:' , =' (,2 ? ,' UB B' UA<22@' BB' ,;' ;AB' < B ;6' ' ,;,2< ,' ;AB' ?,F ;,2:' $, ?B2< ,:' , =' 2, DB' ; ,?;0' < ' ;AB' ?<> ; @' UB B' <??>F B=' H@' ;AB' " B ?A6' ' ;AB' 0;> ,0' ;A BB M>, ;B 0' < ' ;AB' F <E ?B' UB B' AB2=' =<U ' H@' $< B;6' AB' ;U<' ,0; 2B0:' =,2>0 ,' IBW?BF; D' ,= RJ:' $ 0?,@:'),E, B:' %B< :' , =' ,D< ' UB B' B ; B2@' < ' ,2 <0;' B ; B2@' ' ;AB' A, =0' < ' ;AB' B B @6' AB' =B2BD,;B0' 0>FF<0B=' ;<' BF B0B ;' ;AB ' UB B' B ;AB ' ?A<0B ' ' A<2B , = ?< B ' BB; D0' < ' 0> DB ;' N> ;,0' 2> D' ' 0< B' B <;B' ,0; B00:' < V UAB B' BEB ' ;A 0' 0B H2, ?B' < ' 2<?,2' B2B?; < ' U,0' <;' F<00 H2B' V H@' < ,; < ' H@' ;AB' BDB ?@:' < ' ' UA<22@' ?,0>,2' ,00B H2 B0' < ' ;AB' ,; EB0' < ' ;A<0B' = 0; ?;0' UA<' ?A, ?B=' ;<' HB' ' ,= R' ,;' ;AB' ; B6' AB' BF B0B ;,; EB0' < ' 1,= =:' < ' BW, F2B:' UB B' ?A<0B ' ' ;A 0' ,0A < ' H@' ;AB' H<=@' < ' BW 2B0' < ' ;A,;' ? ;@' BB; D' ' ;AB' 0F,? <>0' ?<> ;@, =' < ' ,' 2, DB' F>H2 ?' H> 2= D' ' AB' B0>2;' < ' ;A 0' < ,2' , =' BD>2, ' B;A<=' < ' ?A< ?B' U,0' ;A,;' , @' F <E ?B0' F> F< ;B=' ;<' HB' BF B0B ;B=' H@' =BF>; B0' UA<' A,=' <' B,2' 2<?,2' 2>B ?B' ;AB B :' H>;' A,=' ?A, ?B=' ;<' ' ?< B =' ;AB 0B2EB0' ;<' ;AB' 0> DB ;' N> ;,0:' < ' ;<' ;AB' FB 0< 0' V ' 0< B' ?,0B0' ,' B B' A, = >2 V UA<' A,FFB B=' ;<' A,EB' 2B=' < ' ;A,;' F, ; ?>2, ' BD < ' ;<' ,= R6' ;' 0' 0, =' ;A,;' ;AB' EB @' , B0:' , =' >?A' < B' ;AB' FB 0< 0:' < ' ,' D<<=' , @' < ' ;AB' =BF>; B0' UB B' ,H0<2>;B2@' > <U ' ;<' ;AB ' 0>FF<0B=' ?< 0; ;>B ;06' 1 <0;' < ' ,22' U,0' ;A 0' ;AB' ?,0B' U ;A' ;AB' B HB 0' < ' ;AB' < ;B0' UA<' UB B' 0>FF<0B=' ;<' BF B0B ;' F, 0A' B ?,6' ;' A,=' HBB ' =B? BB=' H@' ;AB' 2,;B' B ; ,2' C> ;,' ;A,;' ;AB' ?<2< B0' < B='

, ' ;BD ,2' F, ;' < ' ;AB' F, 0A' < , ?A@:' , =' UB B' ;AB B < B' B ; ;2B=' ;<' BN B0B ; , ; < 6' $>;' ;AB' <=B0;' > HB ' < ' ;UB ;@ ' 0 W' B HB 80' ,22<; ;B=' ;<' ;AB ' UB B' B2B?;B=' , ;' , = R:' H@' , ' ?< Y ; ;BB' < ' B ?, 0' < , ;B=' H@' ;AB' BDB ?@' < ' ;A<0B' UA<' A, FFB B=' ;<' HB' B0 =B ;' ' ;A, ;' ;<U 6' 1 <0;' < ' ;AB' =BF>; B0' UB B' <>;' < ' ;<>?A' U ;A' ;AB' FB<F2B' HB@< =' ;AB' 0B, 0:' < ' UA< ' ;AB@' UB B' ;AB< B; ?, 22@' ;AB' =B2BD, ;B06

A 0' , ?;' U, 0' 0FB? , 22@' > < ;> , ;B' UAB ' ;AB' 0;' 0@ F;< 0' < ' = 0?< ;B ;' , =' 0B= ; < ' ' $>B <0' @ B0:' 1 BW ?<:' , =' ;AB' , , ??, 0' A, =' HBD> ' ;<' 0A<U' ;AB 0B2EB06 A<>DA' BU' B, 2 RB=' ;' , 0' @B;:' ;AB' 0> B?; < ' < ' F, 0A' B ?, ' U, 0' N>0;' , H<>;' ;<' H B, ' < ;A6' AB' 2B, 0;' < B0BB ' < ' , 22' ;AB' B0>2;0' < ') , F<2B< 80' , DD B00 < 0' ' 2=' F, ' U, 0' ;A, ;' ;AB' ?<2< B0:' UA ?A' A, =' HBB ' ?, 22B=' >F< ' ;<' ; , B' ;AB ' F, ;' ' ;AB' , ; < , 2' U, ' , D, 0;' ;AB' " B ?A:' , =' A, =' HBB ' F < 0B=' , ' 0A, B' ' ;AB' , = 0; , ; < ' < ' ;AB' B F B:' 0A<>2=' , ??BF;' ;AB' 0A<U' < ' BB=< ' , =' BM>, 2 ;@' ;A, ;' U, 0' < B B=' ' , ' 0B <>0' 0F ;6' AB' B ?, 0' =B , =B=' ;A, ;' ;AB@' 0A<>2=' <' 2< DB ' HB' ; B, ;B=' , 0' 0>HNB?;0' , =' ; H>; , B0' < ' ;AB' <;AB ' ?<> ; @:' H>;' B?<D RB=' , 0' F<00B00 D' DA;0' , =' ;B B0;0' < ' ;AB ' <U :' UA ?A' >0;' HB' ; , B ' ;<' ?< 0 =B , ; < ' UAB ' ;AB' DB B , 2' D<EB , ?B' < ' ;AB' =< < 0' < ' "B = , =' . ' U, 0' ' M>B0; < 6' =' ;AB0B' DA;0' , =' ;B B0;0' ??>=B=' <;' < 2@' , ' ??, N' ;<' 0>?A' 0B2 ' D<EB B ;' , 0' <;AB ' F, 0A' F <E ?B0' F<00B00B=:' H>;' , ' =B , =' ;A, ;' ;AB ' ?< B ? , 2' , =' B?< < ?' BB=0' 0A<>2=' <' 2< DB ' HB' 0>H< = , ;B=' ;<' ;AB' ?< EB B ?B' < ' ;AB' <;AB ' ?<> ; @6' AB' ?<2< B0' ?<>2=' <;' 0BB' UA@' ;AB' < <F<2@' < ' , 22' ;AB ' ; , =B' 0A<>2=' HB' 2B ;' ' ;AB' A, =0' < ' ;AB' B ?A, ;0' < ' 2=' F, 6' AB@' U 0AB=' ;<' ; , ?' < ' ;AB ' <U ' , ??<> ;' U ;A' (B, ;' $; , ' , =' ;AB' ' ;B=' ; , ;B06 A 0' ??, ' U, 0' < B' UA ?A' <' A, H ; , ;' < ' 2=' F, ' ?<>2=' E BU' U ;A' BM>, ;@6' AB' < <F<2@' < ' <>;A' B ?, ' ?< B ?B' A, =' , 2U, @0' HBB ' HB2 BEB=' ;<' HB' ;AB' <0;' B00B ; , 2' ;B ' ' ;AB' D B, ; B00' < ' ;AB' B, 2 6' ;' A, =' HBB ' F B0B EB=' , 2 <0;' , 0' 0; ?;2@' ' ;AB' B DA;BB ;A' ?B ;> @' , 0' ' ;AB' 0BEB ;BB ;A' < ' 0 W;BB ;A6' AB' <2=' @(% ' ' UA ?A' D, EB' (B, ;' $; , ' , ' >;B' 0A, B' ' ;A, ;' ?< B ?B:' A, =' HBB ' ?< ?B EB=' ;<' HB' , ' A> 2 , ; < ' , =' , ' = 0D , ?B' ;<' ;AB' D' UA<' D , ;B=' ;6' F, ' A, =' <>DA;' < B' ;A, ' < ?B' ;<' F B0B EB' ;AB' B ?, ' < <F<2@ V ;' 0' < 2@' B?B00, @' ;<' , 22>=B' ;<' ;AB' U, ' <

O 9) (' C #+ ') *' #' # A'

K CB 08O # , 8 ;<' 0A<U' UA , ;' 0AB' U , 0' F BF , B=' ;<' , ?B' ' ;0' =B B ?B6

=' <U:' UAB ' ;AB' <;AB ' ?<> ; @' U , 0' ' 0>?A' =B0FB , ;B' 0; , ;0:' ;AB' M>B0; < 0' < ' B ?, ' 0B2 D<EB B ;', =' B ?, ' ; , =B' UB B' , 0B=' ' ;AB' ? >=B0;' < 6' (B , ;' $;, ' A , =' F <E< B=' ;AB' = 0; >0;' < ' AB ' F, 0A' , 22 BO' H@' , @' < ' AB ' , ?;0:' BEB ' UAB ' ;AB@' UB B' =< B' ' D<<=' , ;A' , =' U ;A' <' >2;B < ' <; EB6' $>;' ;AB' <0;' ;, ; D' < ' , 22' U , 0' ;AB' BM>B0;:' 1 A ?A' A , =' HBB ' , 2 B , =@' , =B' < B' ;A , ' < ?B' ' , ' ;B ;, ; EB' , 0A < :' < ' , ' B , 0> B' < ' BB' ; , =B' U ;A' <>;A' B ?, 6' & B22 D;< ' A , =' B?< B =B=' ;A , ;' ;AB' F< ;' 0A<>2=' <;' HB' F B00B=:' UAB ' F= ' U , 0' ' AB ' BW; B ;@7' H>;' ;' U , 0' BE ;, H2B' ;A , ;' 0 ?B' B , 2@' , 22' $; 0A' 0>HNB?;0:' , =' B , 2@' , 22' B ?, 0:' UB B' =B0 <>0' ;<' 0BB' ;AB' <2=' H, B 0' B <EB=:' ;AB' M>B0; < ' 0A<>2=' ? <F' >F' , D , ' , =' , D , 6' AB' <FB D' < ' ;AB' B ?, ' ; , =B' U , 0' ;AB' < 2@' B;> ' ;A , ;' F, ' ?<>2=' , B' < ' ;AB' , =' ;A , ;' (B , ;' $;, ' A , =' <U' HBB ' D E D' AB ' < ' < B' ;A , ' ;U<' @B , 0' < ' U , 6' . AB ' , D' ' 5' U <;B' ;A , ;' K' ' M>B0; < 0' < ' ?< B ?B' , @' F <FB ' <??, 0 < ' >0;' HB' >0B=' ;<' B?< B =' , ' < B' B 2, DB=' , =' 2 HB , 2' F<2 ?@' ;A , ' A , 0' A ;AB ;<' HBB ' , ?;B=' >F< ' ' F, :8' ;' 0' B , 0@' ;<' 0BB' UA , ;' U , 0' ' A 0' =6' AB' 0;B 0' ' F<UB ' ' ' UB B' <0;2@' < ' ;AB' 0, B' <F < 6' $>;' ;<' , 0 ' < ' BB' ; , =B' U ;A' B ?, ' ' ;AB' @B , ' UAB ' =, 2D<' U , 0' , D' A 0' 0;' 0 D' ' 1 BW ?<:' , =' ;AB' = 3. (' < ' ;AB' <' =B' 2, ' +2, ;, ' UB B' M> B;2@' 0>H0; ;>; D' > ? F, 2' 0B2 D<EB B ;' < ' ;AB' , ? B ;' , >;<? , ; ?' >2B' < ' ;AB ' E ?B <@0:' U , 0' ;<' F <E< B' , ?>;B' 0>0F ? < 6' ' P 4' (B , ;' $;, ' A , =' H , ? B=' 1 , =' , =' <;AB ' ?<2< , 2' 0BF, , ; 0;0:' B ;AB ' U ;A' ;AB' A<FB' < ' DB;; D' , ' <<; D' < ' AB 0B2 ' ' <>;A' B ?, :' < ' , ;' 2B , 0;' U ;A' ;A , ;' < ' B0; , H2 0A D' BF>H2 ?0' UA ?A' U<>2=' D , ;' AB ' , 22' ;AB' ?< B ? , 2' F E 2BDB0' ;A , ;' 0AB' , 0 B=6' AB' 0>??B00 EB' F, 0A' D<EB B ;0' < ' ' ?<>2=' BEB ' ?< Y E ?B' ;AB 0B2EB0' ;A , ;' ;AB' 0?AB B' A; =' HBB ' ?< F2B ; B2@' = <FFB=:' , =' 0;<< ' $; 0A' =B , =0' < ' <FB ' ; , =B' U ;A' B ?, ' < ' , ' =B0 B' ;<' 0BEB ' ;AB' = 0?< ;B ;B=' ?<2< B0' < ' ;AB ' <;AB ' ?<> ; @6' AB' <0;' > F<F>2, ' , ?;' < ' ;AB' BDB ?@' < ' ' U , 0' ;AB ' =B? BB' < ' 1 , @' 4:' 00>B=:' , 0' , 22' F, , =0' AB2=:' ' H , 0B' 0>H0B E B ?B' ;<' ;AB ' , 22 BO:' UA ?A' A , =' D , ;B=' # D2, =' , =' +< ;>D , 2' , ' ?B ;, ' 2 ;B=' DA;' < ' BW?A , D D' ;AB ' F <=>?;0

L #' 1 # 1 $ # ' "' #' #

U ;A' ;2 >' ?<2< B0:' < ' F, @ D' ;AB' AB, E@' ?>0;< 0 =>B' < ';B ' , =' ,' A, 2 ' < ' ;BB ' , =' ,' A, 2 ' FB ' ?B ;6 ' <' D B, ;' U, 0' ;AB' ? @' , 0B=' ,D, 0;' ;' ' , = R' ;A, ;' ;AB' BDB ?@' U, 0' ?<U, =2@' B <>DA' ;<' ?, ?B2' ;' < ' C> B' :' > =B ' ;AB' F B;BW;' ;A, ;' ;' A, =' <;' HBB ' , ; B=' ' ,' 0B00 < ' , ;' UA ?A' , 22' ;0' B HB 0' UB B' F B0B ;Q

$>;' ;' U, 0' <;' ;AB' B ?, ' M>B0; < ' , 2< B' UA ?A' 2, @' , 0' ,' 0<> ?B' < ' =, DB ' HB < B' ;AB' BU2@ , 00B H2B=' < ;B0:' < ' U, 0' ;' ;AB' B ?, ' =BF>; B0' , 2< B' UA<' 0 BF B0B ;B=' ;AB ' ?< 0; ;>B ;06' FB, D' ' DB B , 2:' ;' ,@' HB' 0, =' ;A, ;' ;AB' UA<2B' , 00B H2@' 0A<UB=' ,' = 0F <F< ; < , ;B' > HB ' < ' 2 HB , 20:' UAB ' ;AB' B2, ; EB' > HB 0' < ' ;AB' =B <? , ; ?' , =' ;AB' ?< 0B Y E, ; EB' F, ; B0' ;A <>DA<>;' F, ' UB B' ; , B ' ;<' ?< 0 =B , ; < 6' AB' BEB ;0' < ' ;AB' BW;' ;B ' @B, 80' UB B' ;<' 0A<U' ;A, ;' ;AB' 9 : 3%(' , 0' ;AB ' <FF< B ;0' ?, 22B=' ;AB :' UB B' B, 22@' ' ,' ,N< ;@' ' ;AB' UA<2B' ?<> ; @ 0 =B' , =' ' , @' ;<U 06' ' ;A, ;' A, =' <;' HBB ' 0<:' "B = , =' . ' ?<>2=' <;' A, EB' B0;< B=' , >;<? , ; ?' D<EB B ;' U ;A' 0>?A' B, 0B' UAB ' ;AB' +B 0>2, ' & , ' U, 0' <EB 6' B, ?; < , B0' < ' ;AB' H2, ? B0;' =@B:' UA<' U<>2=' A, EB' 2 B=' ;<' B0;< B' ;AB' M> 0 ; < :' , =' U<>2=' A, EB' F>;' H, ? ' ;AB' F B00' ;<' ;AB' 0A, ? 2B0' UA ?A' ;' A, =' B => B=' HB < B' 4:' UB B' F <H, H2@' ' ,' ??2B, ' ,N< ;@' ' ;AB' , ; < 6' AB' ??2B ?, 2' ;B B0;' U, 0' ' , @' U, @0' ;AB' , 0; , @' < ' ;AB' & , ' < ' =BFB =B ?B:' , =' ;AB' ??2B D@:' U ;A' EB @' BU' BW?BF; < 0:' U<>2=' D2, =2@' A, EB' D< B' H, ? ' ;<' ;AB' 0@0;B ' < ' ;AB' B DA;BB ;A' ?B ;> @ 6' AB' ,N< ;@' < ' ;AB' <2=' < ? , 2' ??2, 00' 0@ F, ;A RB=' U ;A' ;AB :' , =' ;AB' FBN 0, ; @' UB B' , 2 <0;' BEB @UAB B' > =B ' ;AB ' ?< ; <26' ' ;AB' <;AB ' A, =:' ;AB' % HB , 20:' ' , 22' 0A, =B0' < ' ;AB ' UB B' B? < B=' ;<DB;AB :' A, =' , ' ??2B, ' ,N< ;@' ' ;AB' < ;B0:' H<;A' HB?, >0B' ;AB' BD < 0' UA ?A' UB B' F <FB 2@' BF B0B ;B=' ' ;A, ;' , 00B H2@' ?A, ?B=' ;<' HB' ;A<0B' ' UA ?A' ;AB@' UB B' <0;' > B <>0:' , =' HB?, >0B' ;AB@' A, =' 0B?> B=' , ' = 0F <F< ; < , ;B' > HB ' < ' ;AB' 0B, ;0' HB2< D D' ;<' ;AB' 2<0;' F <E ?B0:' UA ?A' A, =' HBB ' 22B=' >F' H@' < B' < ' 2B00' ?; ; <>0' B2B?; < 0' U ;A ' ;AB' U, 220' < ' , = R6' A, ;' ;<U ' ;0B2 ' U, 0' ;AB' 2B, 0;' ?< 0B E, ; EB' F2, ?B' ' F, :' , =' ;AB' B >DBB0' UA<' A, =' 0B EB=' , 0' B2B?; < 0' HB?, >0B N; AB@' A, FFB B=' ;<' HB' < ' ;AB

' "< ' =B; , 20' 0BB' ?ABFB2B :' 6' F6' P5 6' 2 B' D<<=0' >0;' , 20<' HB' ?, B=' ' F, 0A' EB00B20:' 0<' ;AB' D , ;' U, 0' <;' ,' EB @' 2 HB , 2' < BQ

^% HB , 2' ??2B D@' < ' ;AB' ;@FB' < ' ;AB' N<> , 2 0;' $2, ?< &A ;B' I%B>?, = <' *<H2, =<J UB B' , B' BW?BF; < 06

P 9) (C # +) * # # A ' %

0F<;: UB B <;= , U < ;AB H>2 < ;AB F<F>2, ; < V UB B B ;AB F B0;0 < FB,0, ;0: V H>;, 2@?, B < ;A<0B 0B?; < 0 < ;AB >FFB , =: ==2B ?2,00B0 UAB B 2 HB ,2 <F < 0 A,= ,=B < B F <D B006

AB < ;B0 < ;AB UA<2B U,0 ,=B <? ,; ?H<=@7 F, : < ;AB EA<2B: U,0 B,?; < , @6 AB > HB < ;A<0B UA< A,;B=) ,F<2B< HB?,>0B ;AB@ BD, =B=A ,0 ;AB B B @< ;AB A> ?A: ;AB N, 2B < ;AB +<FB: , =;AB H B, B >F < <2=2,UO: U,0 >?A D B,;B ;A, ;A,;< ;A<0B UA< A,;B=A HB?,>0B AB U,0 ;AB B H<= B ;< ,>;<? ,?@: , =;AB <B < ,22 BB 0B2 D<EB B ;6 ;B 0B ,;< ,2 F =B U,0 ?< < ;<H<;A F, ; B0: , =,22 ?<>2=> ;B ,D, 0;,<B UA<0B , U,0 ;AB = 0 B HB B ;< F, 6 $>;;AB > < U,0 ,=B = ?>2;H@;AB ,?;;A,; B UA< A,= H HB=: < B < 2B00 ?< 0? <>02@: 0< B < ;AB K + ? F2B0 < 4 58 A,=;< ?< <FB ,;B U ;A B UA< 2<< B=H,? < ;AB BD B < +A 2 F ,0 ,(<2=B DB6 K ?, 0BB < F <0FB?;< % HB ;@HBA =;AB ? <U=< F B0;0 UA< BEB @UAB B 0;, =< B <0;;< ;, B ;AB 2B,=< <> F,; <;06 ?, <;2<< < ,@= B?;,=E, ;,DB < ;AB BB2 D UA ?A F < F;0 ;AB F B0B ;B0 0;, ?B ;<),F<2B< :,0 ;, 0B0 ?A B 2@ < , EB;B ,;B ,;;,?A B ;;< ;AB B2 D <>0 0@0;B UAB ?B <> F B0B ;=BD ,=,; < ;, B0 0<> ?B6 ;AB ?<> 0B < BEB ;0 B ,H2B0 >0 ;< ,;;B F;,F<2 ;?,2 B < :;U 22 HB H@D , ; D ;AB BBH2B 0A<<;0 < % HB ;@>F< ;AB 0;<? < , ;A<2 ? 0 :, BWFB B ;UA ?A A,0 A ;AB ;<:, =>0;BEB :F <EB ,H< ; EB8 U <;B ,=B0F< = D % HB ,2 <U ?<>2=;AB U ;B < 0>?A U< =0, =A 0 B =0U< ?< =,22@ ?< F, @U ;A0>?A , ,; ?0 ,0 ;AB #0; B ,=> , =BF>;@UA<: < B < ;AB B, = B 0B00 < 0 < ;AB < ;B0: F <F<0B=;AB ,0;< 0A D <; < ;A,;: 0F ;B < ,22 ;A,;A,=A,FFB B=0 ?B 4: K;AB M> 0 ; < B , 0 >22 F<00B00 < < ;0 , ? B ;,>;A< ;@: , =?, , B BB >0B < ,22 ;AB F<UB 0 UA ?A ;A,0 BEB B N<@B= ;AB F,0;

AB B UB B <;AB 0 UA< <HNB?;B=;< ;AB >0B < ;AB =, DB <>0 U< =K?< 0; ;>; < :8, =BEB ;< ;AB FA ,0B 3 (3%;%(. %T() ,0 F2@ D, ,>;A< ;@ =BFB =B ;< ;AB ? <U

T *<H2,=<80 %B;;B 0: F6 5 6

T 1<; < H@< B" , ? 0?< 1, , B0?<:=BF>;@:, =< B 2@ M> 0 ;< :, ;%2B B , # 0; B ,=> ,6 D>B22B080 < ('%(. %. 6 F6 56

BB HB2<U: F6 P 6

22 B ; 0 B B HB B= ;A, ;; ;AB < UA ?A ;AB < ;BO A>= HBB 0> < B= U,O BU , = BWFB B ; ,2: ;A, ;; ;AB B2B?; < O A,= HBB V BEB , ??< = D ;< ;A, ;; < V BD>2, : ;A, ;; <0 D2B B HB U,O , ??>0;< B= ;< F, 2 , B ; , @ >0, DBO: ;A, ;; ;AB F, ; BO BF B0B ;B= ; ;; AB2= E BUO < ;AB <0;= EB Y DB ; =0: ;AB U< =B O <; ;A, ;; ;AB ,00B H2@ = 0F2, @B= , @ UB, B00B0: H>;; ;A, ;; ;= = < U< 0B6 H0B E B O < , FB00 0; ? , B < = A,= B, B= ;A, ;; ;U<>2= H B, >F ,2;<DB;AB , ;B , BU 0;< @ 0 ;; D06 K ; U,O ;<< >22:8 U <;B ;AB BDB ; %, = R, H, 2: K < @<>; A0: , = < B UA< @B0;B =, @ UB B B ,=EB ;> B T0: U ;A<>;, @ F ,?; ?B ?< , =: <U2B=DB < H>0 B00: < BWFB B ?B < ;AB U< 2=6 & A<2B F <E ?BO UB B BF B0B ;B= H@ =BF>; BO UA< ;AB@ A,= <; ?A<0B : , = UB B BWFB?;B= ;< ?< < ;< ,? ?< 0; ;>; < : , = ;< ,??BF;? 0UBBF D B < 0: ,=B H@ B ; < UA< ;AB@ A,= D EB < , =, ;B: ,?>2;@: < , >; A< ;@ ; < ; , B 0>?A ?A, DBO ; < ?< 0 =B , ; < 6 "< B ;AB ;AB BDB ?@: < BEB ;AB 9 D: A,= ;AB 2BD, 2 DA; ;< < , ;B =BF>; BO6 < < B ?<>2= ?A<<0B ;AB 0, EB ;AB F <E ?BO < ? ; BO UA ?A UB B ;BD , 2 F, ;O < ;AB , ; < : , = < < B ?<>2= ?2, ; < BF B0B ; , F <E ?B 0, EB ;AB B ;< UA< ;A, ; 0, B F <E ?B A,= D EB F<U B 0: , = 0; >?; < O ; < , ?; ; ?< < ;@ U ;A ;O U 0ABO6

A 0 <;2B@ ,00B H2@: 0< , @ < UA<0B B HB O UB B < =<>H; >2 2BD ; , ?@: AB2= ;O <FB D 0B00 < < BF;B HB O: 6 AB BB; D F2, ?B U,O <; U ;A ;AB U,220 < , = R ;0B2 : H>; ;AB 2, 8DB 0>H> H, ;<U < % , 02, : ;AB ?B ; B < ;AB D B, ; 02, = < %B< : UA ?A < 0 ;AB <>;U< < ;AB ? ;@6 ; U,O A<FB= ;A, ;8 ;AB 0 W 2BO UA ?A 0BF, , ;B= ;O 0 ; ; D F2, ?B < , = R U<>2= F BEB ; ;B >F; < H@ F<F>2, =B < 0; , ; < 0: 0>?A ,O A,= HBB 0< FB ? <>O ;< ;AB " 8B ?A ?A, HB => D ;AB BE<2>; < 6 AB < ;BO A,= ,O ;AB A< B ;AB 2, DB H>; H, B ;AB, ; B < , " B , =<: UA ?A A,= HBB <>DA2@ ; ;B= >F U ;A HB ?ABO , = ; H> BO6 ;B A DA ,00 A,= HBB ?B2BH , ;B= H@ ;AB <2= , = , 2 $<> H< : ;AB < 2@ ,2B B HB < ;AB <@, 2 , 2@ UA< U,O <; ?, F; E ;@ : ;AB BDB ?@ =B?2, B= ;AB 0B00 < <FB B=: , = ;AB U ;A= BU : , ;B

T B U,O < ;AB 0, B H , ?A ,O ;AB <> ;B00 < A ?A< : (<=<@8O U B: HB D 0< < %> 0: @<> DB0; ?A 2= < +A 2 F . : H@ , M>, 0 < D, , ; ? , , DB U ;A , 2, =@ < ;AB , B < . ,22, H D, :

9) (' C #+ ') * ' #' # A '

,' H B ' 0FBB?A' H@' ;AB' B < ' BDB ;:' ;AB' $ 0A<F' < ' B 0B:' UA<' H,=B' ;AB' ,00B H2@' ?< 0; ;>;B' ;0B2 ' ' =>B' < ' , =' B2B?;' ;0' F B0 =B ;' , =' 0B? B;, B06

A 0' U,0' =< B' U ;A' <' =B2,@7' ;AB' F B0 =B ;' ?A<0B ' U,0' ,' ,;,2, :' , ; ' %,R, <' =B' * <>:' UA 2B' ;AB' ;U<' 0B? B;, B0' UB B' #E, 0;<' +B BR' =B' ,0; <' , =' 1 , >B2' %>N, 6' $<;A' < ' ;AB ' UB B' UB22' <U ' ;<' B ;B ;, ' % HB ,2' <F < 0:' , =' ;AB ' ?A< ?B' , B=' ;AB' F B=< , ?B' < ';AB ' F, ;@' ' ;AB' < ;B06' ;; D' ; 22' = DA;' E,0 2< D' F,0;:' ;AB' ,00B H2@' F,00B=' 0 W' =B? BB0' = ,U ' >F' H@' 1 > <R' < B <:' < B' < ' ;AB' ? .' ?2B ?,2' =BF>; B0' UA<' AB2=' % HB ,2' E BU0:' , =' 1 , >B2' %>N, 6' $@' ;AB0B' ;AB' < ;B0' =B?2, B=' ;0B2 ' ' F<00B00 < ' < ' 0>F B B' F<UB ' ' ;AB' ;,;B:' H>;' B0<2EB=' ;A,;:' < ' ;AB' ;A BB' H , ?AB0' < ' ,>;A< ;@ V ' ;AB' 2BD 02,; EB:' ;AB' BWB?>; EB:' , =' ;AB' N>= ? ,2 V ;' ;B =B=' ;<' ;, B' < 2@' ;AB' 0; , B=' > =B ' ;0' <U ' ?A, DB:' A, = D' <EB ' ;AB' BWB?>; EB' ;<' ;AB' 2,;B' BDB ?@:' , =' ;AB' N>= ? ,2' ;<' ;AB' < = , @' ?<> ;0' < ' 2,U6' AB' BDB ?@' 0A<>2=' HB' B0F< 0 H2B' ;<' ;AB' < ;B0' < ' ,22' ;0' ,?;0' < ' ,= 0; ,; < :' , =' 2 ,H2B' ;<' HB' ?,22B=' ;<' ,??<> ;6' ;' U,0' < =B B=' ;<' , B' , ' 0;, ;' <,;A' < ' <HB= B ?B' ;<' ;AB' ,00B H2@:' K B?<D R D' ;AB' 0<EB B D ;@' < ' ;AB' ,; < ' BF B0B ;B=' H@' ;AB' =BF>; B0' < ' ;A 0' DB B ,2' , =' BW; ,< = , @' < ;B06' A 0' ,0;, <0' , =' ;AB' <;AB ' BDB ;0' = =' U ;A' , ' 22' D ,?B:' ,22' 0,EB' ;AB' $ 0A<F' < ' B 0B:' UA<' 02 B=' ;AB' <,;A:' ?< ;B = D' ;A,;' ;0' ;B 0' 0F< B' < ' ;AB' ,; < ' ,0' HB D' 0<EB B D ' ' ;0' ?' DA;:' U ;A<>;' ?< 0 =B ,; < ' < ' ;AB' 9 D80' =B B,0 H2B' ,NB0;@ 6' B' U<>2=' <;' 0UB, :' , =' 0<' E,?,;B=' A 0' F2,?B6' B' = =' <;' 2<0B' >?A' H@' A 0' B, 2@' = 0 00,2:' < '< ' ?;<HB ' ';AB' < ;B0' ,H >F;2@' =BF<0B=' A 0' <> ' ?<22B,D>B0 V ,0;, <0:' %, = R,H,2:' ,,EB= ,:' , =' #0?, <V , =' BF2,?B=' ;AB ' H@' ,' BU' BDB ?@' < ';A BB' B HB 06' AB0B' UB B' C<,M> ' $2, B:' ;A,;' <0;' > 2>? @' < 'DB B ,207' = ,2' 0D, :' ;AB ' ?< , = D' ;AB' , ;A,DB ,' 0M>,= < :' UA<' F,00B=' ,0' , ' ,H2B' ,= 0; ,;< 7' , =' , ' <H0?> B' ,E,2' ?,F;, :' +B= <' D, :' < 'UA< ' 2 ;;2B' U,0' <U ' 0,EB' ;A,;' AB' U,0' B ?, ' H< :' , =' DA;:' ;AB B < B:' ;AB< B; ?,22@' BFW80B ;' ;AB' ?<2< B06' AB

' K' `>B' 2,' ,? = ' B ,' 0<HB , ,' ' %3' %' ' =B0=B' 2>BD<' F B0;, ,' B2' N> , B ;<' FB= =<6' +B <' 0 ' 0B' B ;B = ,' M>B' 2,' ,? = ' B ,' 0<HB , ,' (' %3' %' ' ;' 0<HB , ,' =B' 0>' 0 <' 0<HB , <:' > ?,' 0B' 0< B;B ,' ,' ;,2' =<?; ,6' BB' < B' < 'A 0' , D> B ;' ' < B <:' 6' P6

;AB' 9% 2 3%(' U<>2='N< ' U ;A' ;AB' % HB ,20' UAB BEB ' , @' =<>H;' U,0' , 0B='U ;A' BD, =' ;<' ;AB' DA;' < ' ;AB' < ;B0' ;<' , <D,;B' ;<' ;0B2 ' ;AB' ; ;2B' < ' 1 ,NB0;@' < ' ;AB' ,;; H>;B0' < ' 0>F B B' F<UB 6' & AB :' < ' BW, F2B:' ;AB' $ 0A<F' < ' B 0B' B >0B=' ;<' ;, B' ;AB' <,;A' < ' <HB= B ?B:' 0BEB ,2' ??2B ?,20' < ' <0;' B,?; < , @' E BU0' ;<< ' F, ;',D, 0;' A '7' , =' UAB ' ,' BU' UBB 0' 2,;B ' ;AB' 1, M>B0' =B2' +,2,? <:' , B=' ,0' ,' =BF>;@ BDB ;' => D' ;AB' ,H0B ?B' < ' $2, B:' ,20<' = 0F2,@B=' B2>?;, ?B' ;<' 0UB, ' ;<' ;AB' 0, B' < ' < ' 0 2, ' D <> =0:' AB' = =' <;' B?B EB' ;AB' BF< ;' ;A,;' AB' A,=' BWFB?;B=' < ' ;AB' B,?; < , B06' =BB=:' AB' U,0' F>;' > =B ' , B0;' < ' 0< B' ; B:' U ;A<>;:' ,0' ;' 0BB 0:' , @' ,;;B F;' ;<' F <;B?;' A ' HB D' ,=B' H@' ;AB' 9% 2 3%(' % B' ;AB' $ 0A<F' < ' B 0B:' AB' B =B=' H@' 0U,22<U D' A 0' 0? >F2B0' , =' ,??BF; D' ;AB' F B0? HB=' < >2,'

' 0 2, ' =B0 B' ;<',00B ;' ;0' <U ' ,H0<2>;B' 0>F B ,?@' FB22B=' ;AB' < ;B0' ;<' B >0B' ;<' ?<> ;B , ?B' ;U<' =@ ,0; ?' ; D>B0' UA ?A' ?, B' < ' = B B ;' M>, ;B 06' AB' B2=B0;' =,>DA;B ' < ' A, 2B0' .:' , 2<;;,:' + ?B00' < ' ;AB' $,R 20' , =' U B' < ' ;AB' BDB ;' C<,<' < ' +< ;>D,2:' U,0' ;AB' B, B0;' < ' ' ;<' "B = , =' . ' UA<' A,=' B0?,FB='),F<2B< 80' ??,U0' ' 6' AB' U,0' < ' <F < ' ;A,;' 0AB' A,=' ,' D<<=' DA;' ;<' BWFB?;' ;AB' BDB ?@' => D' AB ' H <;AB 80' ?,F; E ;@' ,;' .,2B ,@:' , =' AB ' ,DB ;0' BFB,;B=2@' > DB=' AB ' ??2, 0:' H<;A' => D' ;AB' =,@0' < ' ;AB' 0;' BDB ?@' , =' , ;B ' ;AB' < ;B0' A,=' ,00B H2B=6' <>0, <20;B :' ;AB' +< ;>D>B0B' , H,00,=< :' ,;> ,22@' 2B ;' ;AB ' A 0' , =:' , =' 0AB' A,=' F, 0A' F, ; 0, 0:' ;A<>DA' BU' < ' ;AB ' UB B' FB 0< 0' < ' D<<=' BF>;,; < 6' ! B;:' H@' ?< 0;, ;' FB 0>,0 < ' , =' F < 0B0:' , 2<;;,80' BF B0B ;,; EB0' ,?;>,22@' 0>??BB=B=' ' =>? D' D B,;' > HB 0' < ' ;AB' =BF>; B0' ;<' F2B=DB' ;AB 0B2EB0' ;<' F>0A' AB ' ;B B0;06' ;' 0' 0, =' ;A,;:' ,;' < B' ; B' < ' , <;AB :' ,' >22' A,2 ' < ' ;AB' B HB 0' A,=' D EB ' ;AB' ; D>B 0' B ?<> ,DB B ;6' $>;' ;<' =<' ;A 0:' , =' ;<' , B' ,' < ,2' ,;;B F;' ;<' F,00' ,' =B? BB' ?< B D' ;AB' BDB ?@' < ' AB :' UB B' EB @' = B B ;' ;A D06' & AB ' <EB ;' ,?; < ' U,0' > DB=' H@' AB ' ,DB ;0:' < ' ;AB ' F, ; 0, 0' ' ;AB' < ;B0:' <;A D' ?, B' < ' ;AB' ,;;B F;6' AB' ,00B H2@' U,0' ,;> ,22@' > U 22 D' ;<' 0> B =B ' ;0' <U ' 0<EB B D ;@:' , =' ;<' ; <=>?B' ,' ?<> ;' , =' ;0' ; D>B0' ;<' ,= R6' ;' >0;' HB' ,==B=' ;A,;' C<,<' < ' +< ;>D,2' A,=' <' 2 D' < ' A 0' U B80

S % $ # & ' " @' # & ' ! # !

0?AB B:' ;A , ;' & B22 D;< ' 0 , U' ;0' = 0 , =E , ; , DB0 :' , =' ;A , ;' ;AB' D B , ;' H>2 ' < ' ;AB' F , , =0' U<>2=' A , EB' B0B ;B=' ;AB' UA<2B' , , :' , 0' , '+< ;>D>B0B' ; D>B:' ' ;' A , =' BEB ' HBB ' 2 , =' HB < B' ;AB' , ; < ' , 0' , '=B ;B' F <F<0 , 26

AB' 0B?< =' =@ , 0 ; ?' 0?AB B' UA ?A' E,0' > D' ;0' ?<> 0B' , ;' ;A 0' ; B' U , 0' B D BB B=' H@' , <;AB ' H , ?A' < ' ;AB' F , 0A' <@ , 2' A<>0B6 AB' B0;2B00' , =' > 0? >F>2<>0' `>BB ' , <2 B' < ' ? 2@' ?<>2=' <;' < DB;' ;A , ;' ' , 2<; , ' < ' +< ;>D , 2' U , 0' ;AB' B , B0;' B2 , ; EB' < ' ;AB' ? , F ; EB' 9 D:' @B;' AB ' A>0H , =' "B = , =' U , 0' A 0' B , B0;' , 2B' 0 , :' 0 , EB' ;AB' F ?B0' ') , F<2B< 0' A , =06 AB' , E , 2B=' AB 0B2 ' < ' ;A 0' , ?;' ;<' > DB' ;A , ;' < B' < ' AB ' ?A 2= B ' U<>2=' HB' , ' EB @' 0> ; , H2B' FB 0< ' ;<' HB' B ; >0;B=' U ;A' F<UB ' ' F , :' , =' ;A<>DA;' < ' AB ' @<> DB ' 0< ' + ?B' %B<F<2=' , 0' , ' F<00 H2B' ? , = = , ;B' < ' ;AB' BDB ?@6 $>;' 0 ?B' AB' A , =' <;' ;AB' B?B00 , @' BF>; , ; < ' < ' , DB:' ;AB' `>BB ' 0<< ' B22' H , ? ' >F< ' AB ' 0< 2 , U' %<> 0' +A 2 FFB:' * > B' < ' 2B , 0:' ;AB' BW 2B=' 0< ' < ' ;AB' , <>0' +A 2 FFB' #D , 2 ;B6 B' A , =' <;' < 2@' , ' D<<=' 2 ; , @' B?< =' < ' A 0' 0B E ?B0' , ;' CB , FFB0' , =' B20BUAB B' ' ;AB' B , 2@' $B2D , ' ?, F , D 0:' H>;' E,0' > EB 0 , 22@' < E ' , 0' , ' , ' < ' , H 2 ;@6 ' < ;> , ;B2@:' AB' A , =' <>DA;' < ' ;AB' BF>H2 ? , ' 0 =B' ' 45 V , ';A D' A , =' ;<' < DB;:' , =' ?B , ' ;<' ?, >0B' 0>0F ? < ' G , =' A 0' , H 2 ;@' E,0' , HE , @0' = 0F2 , @B=' < ' F> F<0B0' < ' 0B2 ;B B0;:' , =' 0 , E<> B=' < ' > 0? >F>2<>0 B006

9 ! !# 0 !' "' "&') " ' !' ' ' "' @ &' ' ' ! ' ' ' # "' "' + ' ') ! "' +&') ' ')) "' ' ' + " !' ' ? ' &' "' "' ' * ' ' ' ' " # "' ' ' ' ' ' "' ' ? " 7# "' ! "' ' ' ! ') ! ' + ' ' ? !' "' ' "' !' ! ' C ' *' !) ' ' ' +&# ' ' !!) + &' " "') ' "' !' !' !' ! ! ' !' ' ! !# ! "' ' ') ' ' " ' ' ' ' ! "') ! ' + ' !' " !# "' ' &' + ') &' ! ! "' ' ' ! "' ' ' . &' ' ' ' " &! 3 ' " ' 1 ' ' !' "' ' + &' 8 % ' ' !' ' ' !' ' J) # ' ' > + # ' ' ' !' ' ' "' ' + ' ' @ ' + # ' ' "' ! "' ' + ' # ' ' ' !' ' ' !' ' ' ' '

' BB' & B22 D;< ' ;<' B @' . B22B02B@:') <E6' O: ' \ !' ';AB' + ?B00' < ';AB' $, R 20' AB' ;AB' FB 0< ' , FF< ;B=' BDB ;:' ;AB' <> ;' E22' HB' > =, ;B=' U ;A' ; D>B 0' < ' , 22' , ; < 0:' , =' , ; ;B =B=' H@' <;AB ' BE 2068

;AB' <@ , 2' A<>0B:' , =' ;AB B < B' = 0; , 0;B >2' ;<' ;AB' BU2@ , 00B H2B=' < ;B0:' UA<' UB B' 0B? B;2@' ?2 B=' ;<' =B <? , ; ?' E BU0:' ;AB' , N< ;@' E BUB=' A ' U ;A' = 0 , E<> 68' ' ?;<HB ' ' AB' 0B;' 0 , 2' < ' + , 2B <6

;' ;AB' B =' < ' ' UB' 2B , EB' ;AB' < ;B0' 0; 22' =>2D D' ' B @' ?< 0; ;>; < , 2' =BH , ;B0:' 0; 22' H>0@' ' , 00B ; D' ;0' <U ' 0>F B B' F<UB :' , =' ?> H D' , @' , ;;B F;0' , ;' 0B2 , 00B ; < ' ' ;AB' BU' BDB ?@' UA ?A' ;' A , =' ? B , ;B=6' & ;A' ;AB' # D2 0A' D<EB B ;' ;' U , 0' <;' < ' ;AB' HB0;' < ' ;B 0' 6 ;A<>DA' ;' =B? BB=' ;AB' B B?; < ' < ' , '0; , ;>B' ;<' (B< DB' ' , 0' ;AB' B =' , =' =B2 EB B ' < ' F , V , ' < > B ;' UA ?A' I ;' BB=' A , =2@' HB' 0 , =J' U , 0' BEB ' B B?;B= V ;' U , 0' EB @' 02<U' ;<' 0BB ' < ' <22<U' ;AB' , =E ?B' < ' ;AB' , 22 B=' F<UB 6' ;' ?2 , <> B=' < ' 0>H0 = B0:' H>;' B >0B=' ;AB' <FB D' < ' ;AB' <>;A' B ?, ' ; , =B V ;AB' < 2@' B;> ' ;A , ;' ?<>2=' HB' D EB ' < ' ;AB 6' 1 < B@' 'A , =' D<2=' < ' 0 2EB ' (B , ;' $; , '?<>2=' <'2< DB '0>FF2@ V < ' ;AB' @B , 0' 'UB B' ;A<0B' UAB ' ;AB' F , FB 00>B0' < ' ;AB' $, 'UB B' <> '0<2B' ?> B ?@7' ?, 0A' A , =' , 2 <0;' = 0 , FFB , 8B=:' , =' ?<>2=' < 2@' HB' F <?> B=' H@' < B D' 0 W' F<> =0' < ' < B' ' <;B0' < ' EB' D> B , 0' $ >;' ;AB' F , , =0' = =' <;' U , ;' F , FB :' H>;' D ;0' < '2<, 0' 'D<2=' < '0 2EB 6' AB@' D<;' <' < B' < ' ;AB' F B? <>0' B; , 20 V (B , ;' $; , 'A , =' < B' ;<' 0F , B:' , =' <> =' ;' , 2 <0;' F<00 H2B' BEB ' ;<' F <?> B' =<22 , ';<' F , @' & B22 D;< 8' , @' ' +< ;>D , 26' 22' ;A , ;' U , 0' D EB ' , ;B ' 5' U , 0' , 0' , =' > ; < 0' < 'U , 6

6 # D2 0A' <H0B EB 0' ' ;AB' +B 0>2 , 'UB B' <;' UB22' F2B , 0B=' U ;A' ;AB' 0;' < ;A0' < ' ;AB' >2B' < ' ;AB' < ;B06' K' AB' , ;> , 2' ?<> 0B' < ' , 22' F<F>2 , ' , 00B H2 B0:8' U <;B' & B22 D;< ' ;<' A 0' H <;AB :' B @' & B22B02B@:' <U' 0;B ' , ;' , = R:' K' , =' < ' ;AB' F , 0A' < ;B0' , < D' <;AB 0:' 0' ;<' , =<F;' =B <? , ; ?' F ? F2B0:' , =' ;<' EB0;' , 22' ;AB' F<UB 0' < ' ;AB' ; , ;B' ' ;AB ' <U ' H<=@6' A 0' , 00B H2@' >0;' ;, B' ?, B' ;A , ;' ;AB@' =<' <;' > ' ' ;A , ;' ;B F; D' ?<> 0B:' , 0' ;AB' U 0AB0' < ' ;AB' , ; < ' , B' =B? =B=2@' < ' < , ?A@6' ?? , ; < ' ;<' , @' <;AB ' < ' < 'D<EB B ;' U<>2=' B= , ;B2@' =BF EB' ;AB ' < ' ;AB' ?< =B ?B' < ' ;AB' FB<F2B:' , =' ;AB@' U<>2=' HB?< B' ,' U< 0B' D<EB B ;:' , =' < B' F<;B ;:' HB? , >0B' < B' > B <>0:' ;A , ' ;AB' <2=' B ; , 2' C> ;, 68' ' BU' UBB 0' 2 , ;B 'AB' =<>H;B=' UAB;AB 'BEB ' ,' BDB ?@' > =B ' , 2<;;, ' <

L * # " # ' " ' #' #

< ;>D>2:' U ;A' ,22' ;0' = 0 ,=E , ; ,DB0:' U<>2=' <;' HB' HB;;B ' ;A, ' B B' =B <? ,?@

. ,>DA, :' < ' ;AB' 0F<;' , ;' ,= R:' D, EB' M> ;B' ,' = B B ;' E BU' < ' ;AB' 0 ;>, ; < :' H>;' < B' BM>, 22@' > ,E<> ,H2B' ;<' ;AB' < ;B0' ,0' ,' D<EB D' F<UB 6' \' ;' 0' >22' < ' F B0;0:' UA<' I> ;B=' U ;A' ;AB' ,; 2, 0J' , 8B' < ' F B0B E D' ;AB' <2=' <>; B:' , =' ,=EB 0B' ;<' BEB @Y ;A D' ;A, ;' ?, ' D EB' B B D@' , =' E D<> ' ;<' ;AB' <FB , ; < ' < ' D<EB B ;6' " , , ; ? 0 ' , =' FB 0< ,2' ;B B0;' = B?;' ;AB ' <F < 06' 6 6 6 ' $B' ,00> B=' ;A, ;' ;AB' < ;B0' 0:' ,0' , ;' F B0B ;' ?< 0; ;>;B=:' , @;A D' H>;' BE<2>; < , @' < ' C,?<H ?NW26' 6 6 6 ' ;AB B' 0' <;' 0<< ' 0< B' BU' 0F ;' >0B=' ;<' ;:' ;' U 22' HB?< B' , ' <EB D <U ' C> ; ,:' B==2 D' U ;A' BEB @' F, 2; @' =B; , 2' < ' F<2 ?B:' , =' BD2B?; D' ;AB' 0, B;@' < ' ;AB' ?<> ; @V , =' ;AB' BDB ?@' U 22' HB' ?< ;B ;' ;<' B D ' IEB @' H, =2@J' <EB ' , = R' , =' ;AB' 02,

AB B' U,0' >?A' ; >;A' ' H<;A' ;AB0B' EB = ?;0:' ;A<>DA' . ,>DA, ' > =B , ;B=' ;AB' < ?B' < '0B2 ;B B0;' ' = E D' ,' F<F>2, ' ,00B H2@' ;<' ?2, ' ,22' F<UB ' < ' ;0B2 :' UA 2B' & B22 D;< ' > =B , ;B=' ;AB' =B, = UB DA;' < ' ?2B ?, 2' ?< 0B E, ; 0 :' UA ?A' U,0' ;AB' B0; , ;' >F< ' ;A, ;' ;B =B ?@6' $<;A' UB B' DA;' ' ,00B ; D' ;A, ;:' UA, ;Y BEB ' ;AB' < ;B0' DA;' HB:' ;AB' ,00' < ' ;AB' , ; < ' A, =' <' U 0A' ;<' 0B;' <>;' < ' ;AB' F, ;A' < ' C, ?<H 0 6' AB@' H<;A' FB ?B EB=' ;AB' =, DB ' ;A, ;' ;AB' < ;B0' >DA;' ;> ' ;0B2 ' ;<' ,' ?< 0; ;>; < ,2' =BH, ; D' 0<? B;@:' , =' , ;' ;AB' 0, B' ; B' F BEB ;' , @' B, 22@' B ? B ;' BWB?>; EB' < ' HB D' B0; , H2 0AB=6' >?A' U,0' ;0' , ?; >, 2' , ;B6' #W?BF;' ;A, ;' F, ' <U' F<00B00B=' ,' D<EB D' , >;A< ;@' UA ?A:' U ;A' ,22' ;0' , >2;0:' A, =' ;B2@' < B' F B;B 0 < ' ;<' ?2, ' ,' 2BD, 2' , =, ;B' < ' ;AB' FB<F2B' ;A, ' , @' < ' ;0' F BY =B?B00< 0:' ;AB' 0 ;>, ; < ' U,0' <;' D B, ;2@' ?A, DB=6' " < ' ;AB' 2 ; , @' F< ;' < ' E BU:' ,0' UB' 0A, 22' 0BB' ' ;AB' BW;' E<2> B:' ;AB' , 0FB?;' < ' ;AB' +B 0>2, ' E,0' ' <' =BD BB' F <EB=6' AB' 0, B' H2> =B 0' ;A, ;' A, =' , B=' ;AB' , = 0; , ; < ' < ' ;AB' <2=' + <Y E ? ,2' C> ; , 0:' < ' ;AB' >F B B' B ; ,2' C> ; ,:' , =' < ' ;AB' 0;' BDB ?@:' ?< ; >B=' ;<' BWA H ;' ;AB 0B2EB0' > =B ' ;AB' >2B' < ' ;AB' < ;B06

' & B22 D;< ' ;<' B @' & B22B02B@:' < ' , ; , W<:') <E6' : 6
' A, 2B0' . ,>DA, ' ;<' A, 2B0' ;>, ;:' "BH6' 4: 6

! ! " @ %

2 3 % 4) / 0 % 2 1 5 6 3 %) # # 2 3 % 0 3 7 3

1 7 3 5 /)

AB < D , 2 D, 0< > =B ;AB ?< , = < 2E, BR ?< 0 0;B= < ;AB <22<U D > ;06 2 B 0; ? <2> D EB0 ;AB 0; B D;2 < 1 ,@ :;AB 0B?< = ;AB > HB ;2 , ; B , B= < * B?6 : 5: ;2 B =, @ < ;AB 0> Y B =B 6

BD B ;< ' 2;< , I;A BB H, ; ;06J - P
:: $< H< : P
. <2> ; , BO =B $, ?B2< , : = H, ; ;6 6 : 4
0; H, ; ; , 2 < < ;AB 1 M>B2B;BO < . ?A P
0; e = H, ; ;06 (B < ,
M>, = < < ,) , ? 0<
BD>2, ; 22B @ 6 6 6 6 6 4 0
1 B < ;AB = H, ; ;6 < ;AB 1 WM>B2B;B0 < (B < 6
= , ;B= ;< ;AB , ; 22B @ 0
, 2< 0 = , ;B= ;< ;AB , ; 22B @ 5
, F F B 0 66666666666666666666666666666666666666666666666666

<; , 2 < ;AB < D , 2 D, 0< :4 :

I % % % '(% % 2% . @ : 5 : (' + -
1 M>B2B;B H, ; ; , 2 < < B EB , 6 P
* , ; < ;AB 0; H, ; ; , 2 < < . ?A 6
* , ; < = (B < , 6

I % % % '(= : 5 # = ; 8 . % 9 %) ' G
BD B ;< $, R , I H, ; ;06J : P : 40
0; , = = 1 M>B2B;BO < , 2, 6 5 5
= 1 M>B2B;BO < . ?A 6 6 6
+ ? B= ?< F, BO < , ; , " B : 2 HB , : . <2>
; , <O =B , , D< , 6 6 6 6 P
:PO : 0

== BD 2, O < ;AB ! >0, =B6 %<00BO > <U 6
I 5: 4 B B D, DB= 0; , = 2, 0; ;AB =B B ?B: < 2@ O: O 0> E EB=6

= = $ #' "22#) + ' 1 !' $ # " #' (#) '

6

#' " #) ' " # ' ' #' # (#'

"' (#)

AB' <22<U D' UB B' ;AB' 2<00BO' < ' ;2 B' ;2 BB' = E 0 < 0' UA ?A' ?< =>?;B= ;AB' 0 BDB' < ' (B < ,' => D' ;0' 0; ;2 BB' < ;A0:' =<U ' ;< BF;6

I J' 22 %% 8O' D ,2' BDB' < FO' G

	9' % 5'# ' 9' % 5'# '
* E 0 < ' . B = B G	?: % 6 9%)' ' 6 < ((%(
" B ?2 ' $ D, =BG	I E I E' 9J' 3%
=' %BDB ' I< B' A, ;;6J	OP 0 5 4
(;2 ' % B' I< B' A, 2;6J6	4 0 0 P
=' ' ' 6 6 6	0
P;A' ' ' 6 6 6	P 0 005
(B , ' $ D, =BG	
"> RH> D' I;U<' H, ;;O6J	: PO5
0;' < ' $B D' I;U<' H, ;;O6J	: 4 P
=' ' ' 6 6	: P 0 4 5
* E 0 < ' 1 < <G	
=' & B0;FA, 2 , 0' I;U<' H, ;;O6J' 6	0 PP
=' ::' ::' ::' 6	:OOP 05 5
O;22' 6	0 5
O;A' % DA;' , ; @' I< B' A, ;;6J' 6	P
* E 0 < ' %B??A G	
. B2 ;BO' < ';AB' ;, 2 , ' (>, =	OP 0
;A' ;, 2 , ' % B' I;U<' H, ;;O6J	0
0;') B, F<2 ;, 0' I;U<' H, ;;O6J	4P 4 5
=' ::' ::' ::	: 5 454
	:POO P: 4:4P

' ;AB0B' ' UB B' B;> B=' ,0' 0 ? ' < ' U<> =B=:' , =' :05 ' ,0' =B, =' < ' 00 D6' + <H, H2@' ' UB B' =B0B ;B 06

AB' ; 22B @' ?<> ;B=' < ' ;AB' 0;' =, ;B' IC> B' JG L % (%

+ < ' ;AB' 4;A' ? < F 0 6666666666666666666666666666666666666666666666666 5P

BDB , ' < ' " , ?B' 6 :' 6 6 6 P : P

22 B' B D BB O' , =' 0, FFB O' UB B' 6 6 6 6 ' 0

AB' ?, E, 2 @' I ;2 ' 6?A, 00B> 0:' , =' EB' 0M>, = < O' <

;, 2 , ' A< 0BJ' 6 6666666666666666666666666666666666666666666666666 P 44

:0

== D' ;AB0B' D> BO' ;< ;A<0B' < ';AB' , ; @' ;AB' ;<; ,2' < ';AB' BDB' @' U,0' 4: P ' B 6

P' ++#) * # ' X) <E6

I J' * B' <EB D' @:' > =B ' W6 4 ' ' FB 0< :' ?< 0 0;B=' < ' C> B' '
< ';AB' <22<U D' ; <<F0' G

* 80 @ / 0 * ' N

$ D,=B' $B00 B B0' G %
0;' %BDB ' I;2 BB' H, ;;06J' 6 666666666666666666666666666666666666666666666666 =' >P(
=' ' I< B' H , ; ; 6 J 666666666666666666666666666666666666666666666666 < >
O;A' * ,D<< 0' I;2 BB' 0M> , = < 0J666666666666666666666666666666666666 >S

$ D,=B' #0FB ;G
O =' % B' I;A BB' H , ; ;06J666666666666666666666666666666666666666666666666 :O P
P4;A' ' I< B' H , ; ; 6 J 666666666666666666666666666666666666666666666666 PBB

; ' * E 0 < G

$ D,=B' 1 ,RR>?AB22 ' G
0;' ; ,2 , ' % DB ' I;A BB' H , ; ; 0 6 J 666666666666666666666666666666666 : 5
O;A' ; ,2 , ' % B' ' 666666666666666666666666666666666 :

$ D,=B' " < ; , BG
=' ; ,2 , ' <C5% ' I;2 BB' H , ; ; 0 6 J 666666666666666666666666666666666 : 4
;A' ; ,2 , ' % B' ' 666666666666666666666666666666666 :O 4
;A' ; ,2 , ' ' I< B' H, ; ;6J' 666666666666666666666666666666666 O44

,E,2 @' $ D,=B' + ,2< H ' I ; ,2 , ' A,00B> 0' , =' * ,D<< 0:'
0 W' 0M> , = < 0J' 666666666666666666666666666666666666666666666666 5

G ; ' * E 0 < ' G
4;A' % B' I;U<' H , ; ; 0 6 J 666666666666666666666666666666666666666666666666 : O
5 =' ' I< B' H , ; ; 6 J 666666666666666666666666666666666666666666666666P 4
=' + <E 0 < ,2' A,00B> 0' 6 6 6 6 ' 6 6 05

<; ,2' < ';AB' <EB D' @ 666666666666666666666666666666666 :4

' * B?6' ' ;AB' BDB' @' 0A<UB=' P: O ' , ; @:' : 5 ' B D BB 0:' , ; 22B @:' e?6' AB' <EB D' @' A,=' 0; 22' ' B 6' $>;' ;U< H, ; ;,2 < 0' , =' 0< B' = , ;0' A,=' N< B=' < ' " , ?B:' 0<' ;A, ;' ;AB' ;<; ,2' 2<00' U,0' < B' ;A, ' ;A, ;' = ?, ;B=' H@' ;AB0B' D> B06

* # %' + ` ' # 8 ' 1 ! ')' #' 1 1 # % $ '
* #' 1 # ' 1 + ( ) :' 6) . 6' 5

1)) (' #' "') . # 1 $ # '

. , D>, =' * E 0 < :' 1 ,N< (B B ,2' 1 , ; ' =B' 2,' , B ,' G L % ' % '
T+ ? FB' I;A BB' H, ; ;06J:' T , ,D<00,' I;A BB' H, ; ;06J:' T20;'
< ' , ; , 2< ,:' T =' < ' , ; , 2< ,:' T (B < ,:' T$, H,0; <:
C#0?<2, B0' =B' %B< :' C . ; ;< ,:' C 1 < < ;B' =B' %B <0:
C . <2> ; , <0' =B' 2,' 1 >B ;B:' < B' H, ; ;B @' B2=' , ; 22B @' ' 4: ^

= >L #' 1 !' "' * #%' + ` ' # 4

0;' * E 0 < :' 1 ,N< (B B ,Z" , ?0?<' /,E B '%<0,=,G
;(, ,=B <0' + <E ? ,2B0' =B' (,2 ? ,' I;U<' H,;;06J:' T%B<' I;U<' H,;;06J:' T20;' , =' =' <' , D< :' T.<2> ;, <0' =B' 2,' < < ,' I;U<' H,;;06J:' f BD B ;<' =BZ' (B B ,2:' C20;' , =' =' <'%,' ' < :']$B;,>R<0' I;U<' H,;;06J:' ; B 0B:' ; < F, ,' =B' (>, =,0'),?< ,2B0:' < B' H,;;B @' B2=' , ; 22B @ 66666666666666666666666666666666666666666666666666 =' S'>

=' * E 0 < :' 1 ,N< (B B ,Z' < =B' =B' $B2EB=B G
T B@' I 0;' , =' =' H,;;06J:' K3, < ,' I 0;' , =' =' H,;;06J:' k BE 22B' I 0;' , =' =' H,;;06J:' K <2B=<' I 0;' , =' =' H,;;06J:' K HB ,' I;U<' H,;;06J:' K .<2> ;, <0' =B'),E, ,:' C , ; ,D<:' C%<EB ,' I;U<' H,;;06J:' < B' H,;;B @' B2=' , ; 22B @ 66666666666666666666666666666666666666666666666666 OO' P:O

=' * E 0 < '%X 0;> , 0S:' 1 ,N< (B B ,Z" , ?0?<' $,22,0;B <0' G
K),E, ,I;A BB' H,;;06J:' K + ?B0,I;U<' H,;;06J:' ; E B=<:'
; <E,=< D,:' C. 22,E ?<0,:' C , =,0' @' %>, ?<:' ,0 '
; <F<2:' C+ ,E ,:' C , D,0' =B' B<:' (,=<:' C2 B0;<:
C%B ,:' < B' H,;;B @' B2=' , ; 22B @' 6 6 6 6 ' P 5:P

;A' * E 0 < '%X%B< B0BS:' $ D,= B (B B ,Z' 1, M> 0' =B' ,0; < >B ;BG
; ,=< B0' =B' >=,=' <= D<:' C =' <' >=,=' <= D<:
I.<2> ;, <0' =B' "B , =<. :' ;%B< :' ;%<D < <:
I < <:' I'.,22,=<2 =:' < B' H,;;B @' B2=' , ; 22B @' 6 6 O P:5

B,= `>, ;B 0' (>, =' G $,;,22= '=BZ' (B B ,26 6 6 ' O 54

X)6$6V 8AB' O;A' * E 0 < :' (,2 ?, ' ; <<F0' > =B' 1,2 @'
,H<>;' 4: ' 0; < D:' , =' ;2 B' D, 0< ' < ' >=,=' <= D<:' : 4' H,@< B;0:' UB B' BEB' H <>DA;' >F' ;<'
;AB' < ;6S

,E,2 @' * E 0 < :' ;AB' + ?B' < ' D2< ,G
K $< H< :' K ,D> ;<:' C(, ,=B <0' =B' %2B B ,' 6 6 ' :
I& ;A' < 2@' 'A< 0B06J
k B@ ,:' K + <E 0 < ,Z' BD B ;:' ; ,R,=< B0' =B' >=,=' <= D<' I ?< F2B;B' > ;0:' 2,;B2@' B < B=J:' U ;A' < B' A< 0B , ; 22B @' H, ; ; B @ 66666666666666666666666666666666666666666666666666OP

AB' , ; 22B B ' , =' ,' BU' ?< F, B0' < ' 0,FFB ,' , B'
??>=B=' ' ;AB' = E 0 < ,Z' ;<;,206

<;,Z' : O ' 5:O

" < ' ;A 0' ;<;,Z' < ' O : 4 ' B ' ;AB B' UB B' ;<' HB' =B=>?;B=:' < ') <E6' :' 0 ? ' P:P :' ,H0B ;' : 4 :' =B;,= B=' I < ' ;AB' ;A' * E 0 < J' : 45:' 0<' ;A,;' ;AB' ;<;,Z' < 'B ? B ;0' > =B ' , 0' U,0' : 6

T' 2=' 2 B' BD B ;06 ;' 2=' 2;,' BD B ;06 ') BU' 2BE B06
' A0' + <E 0 < ,Z' BD B ;' B?B EB=' ;AB' , B' < 'K =' < ' 2D, EB' 8'
*B?B HB 6

0 :

1 5 3 / 6 4 0 " % % 3 %) # #)) 3 % 6 # - ;

B =B; , 2B= B;> < ;AB 2<00BO < ;2 B ;A < FO , ; , , BO A,O <; HBB F B0B EB=6 1 , ?A, = B B2@ 60; , ;BO ;A, ; AB 2<0; : B 6 $>; ;AB 0>HN< B= 2 0; < 2<00BO < < ?B 0: ; , B < 2, ; ? 8O E,2>, H2B ; , H2B0: 0A<UO 0> ? B ;2@ UB22 UA ?A UB B ;AB > ;O ;A, ; UB B A, = A ;GV

0; * E 0 < G W 33%. M : .%. = * E 0 < G W 33%. M : .%.

$ D, =B 1 , >?> ?G $ D, =B %, H, 00BBG

;A %BDB 6 ;A %BDB

P5;A % D B6 O 4;A % D B d

$ D, =B 1 , ?<D B;G 5;A % D B

5;A % D B6 O ,E, 2 @G

4P;A % D B6 4 ;2 * , D<< 0 d

;A A, 00B> 0

O 4 ; , ; 1 , N< 6

<; , 2 22B=: U<> =B=6 O

; ;AB , EB , DB , ;B < B A ; FB < ?B : UA ?A F BE, 2B= => D ;AB +B 0>2, . , : ;A O ;<; , 2 < 4 < ?B O <>DA; ;< F2@ , ; <; , 2 2<00 < , H<>; : B 6 $>; 1 , ?A, =8O O F <H, H2@ ?< B?;6

2 3 4) 5 # 0 # 0 / 1 # 2 3) 5 < 1 3 % # 5 3) * = 5)

0 / % 3 4 # 3 > 3 5 -;

X) 6 $ 6 V Hm 8 O F, 0A ?< ; , ?; < < = ' 33C

AB U, @ UA ?2 ; AB <2= , @ < >B0; , U, O = E =B= BF;B HB 5 A, O BEB HBB U< B= <> ; 7 < A, O ; AB ?< F<0 ; < < B R, D, 8O , @ < %, 1 , ?A, : , ; B ; A, = HBB N< B= H@ ; AB #0; B , => , B < ?B B ;0: BEB HBB B?< 0; >?; B=6 0B, ?A ; AB 1 , = = . , ?B: UA ?A U, O , 00 0; B= H@ ; AB = B0O < , F; , " D>B , 0: A, O F <=>?B= ; AB <22<U D ; U< =<?> B ;O GV

I J 2 0; < 2H>M>B M>B8O , @ U ;A<>; , @ D> BO < 0; B D; A 0, EB ; AB DB B , 2 ; <; , 2: , O <22<UO G

! >B F<O M>B M>B=, < ?< 0; ; >B =< B2 >B F< =B #NB ? ; < =B #0; B , => , : =B A< H BO6 ?; 6 : 56

T B, 2BO (>, = , O & , 2< , O IO^ H, ; , 22< J6 X%, ; B D, 0< , ; $, =, N<RC ; 0> , H, ; , 22< BOJ6 X%, ; B < D2B0 , 0 8O * E 0 < 6S

C . B2BR 1 , 2, D, I H, ; , 22< B0J6

I . <2> ; , <O #W; , DB <O H^_J6 ::

; + <E ? , 2 =B $> D<O ::

1 , @< : , , , 0: , ; + <E ? , 2 ; B (>, = W 0B E D , D, ;AB , @ < 2H>M>B M>B6 $>; ?, <; HB 0> B ;A , ; 0< B < ;AB <;AB 0 = = <; , ??< F, @ #D> , I2 B C , B , = < < , J: ;A<>DA <; B ; < B= ;AB =<?> B ; <6 6

.

3 (8 1 !) #) 1 + ( )

) < =B; , 2B= < D 0; , ; B < ;A 0 , @ 2 , 0 HBB F B0B EB=: H>; ; 2 B , B0 , = D <00 ;<; , 20 < ;AB = E 0 < 0 , B < B?< = =<?> B ;0 , ; ;AB 1 , = = & , ?B6 < , ,0 ?, , B ; <>; : ;AB < D, R, ; < < ;AB , @ >0; 2 , EB HBB B, 2@ , 0 <22<U0 G V

) ") ! * .)

. , D>, = * E 0 < : (B B , 2 C<0B 3 , @ , 0 G L % (% . <2> ; , B0 =B . , 2B ? , : = < 1 , N< ?, : + <E ? , 2 =B +2 , 0B ? , : . <2> ; , B0 =B #0F, , : (, , =B <0 + < E ? , 2B0: , ; , H , I0BEB H , ; ; O6J 6 6 6 6 :4I

0; * E 0 < : (B B , 2 %6 %, ?@ G $> D<0: 0; < #0F, , : + <E ? , 2 =B < =<E, : 0; < %<W, : 2?, 2, : 0; < BE 22B: + <E ? , 2 =B A ?A 22, I B H , ; ; O 6J 6666666666666666666666666666666666666666666666666666666666666666666666 4:O

= * E 0 < : (B B , 2 , 0F, . D<=B; G < < , : =B B0 1 2 ; , B0: 0; < (>, = W: < =, : 2?, R, : >=, = B, 2 I B H , ; ; O6J 6 6 6 P:454

= * E 0 < : (B B , 2 +6 (< ; 0; , = = F, 0A (>, =0: = < < < =<E, : $, 2B : + <E ? , 2=B C , B : + <E ? , 2 =B <2B=< IB DA; H , ; ; O6J : O

O;A * E 0 < : (B B , 2 " , ? 0?< , 0; BN< G 0; < 1 , 2, D, : ;A < BE 22B: = < %<W, : $>N, 2, ?B: , R, =< B0 =B . B2BR 1 , 2, D, : / B B0: = < < < =<E, IB DA; H , ; ; O 6J 6666666666666666666666666666666666666666666666666666666666666666666666 P :

;A * E 0 < : (B B , 2 6 3B , G , R, =< B0 =B $, H, 0; <: = < #0F, , : = < BE 22B: = < 1 , = =: + <E ? , 2 =B (, , =, : = . , 22<< (>, =0 I0BEB H , ; ; O 6 J 6666666666666666666666666666666666666666666666666666666666666666666666 5 :P44

;A * E 0 < : (B B , 2) 6 C , ?< B G $, =, N<0: + <E ? , 2 =B 1 , 2, D, : , =< B0 =B #0; B , => , : C , B : + <E ? , 2 =B #? N, I6 J: O; A < BE 22B P 2F>N, , 0 I6 J I B H , ; ; O6 6 J 6666666666666666666666666666666666666666666666666666 4N

4; A * E 0 < : $ D, = B (B B , 2 " 6 <F<>0 G 1 > ? , : B , 2 1 , , : ?, : B@ , I0 W H , ; ; O6J 6 6 54 O:5 4

<<F0 <; ?2>=B= , @ = E 0 < 7V (, , =B <0 =B2 (B B , 2: < F, , =B $>B =B : < F, A, 0 >B2; , 0 V

= B

. % !

< , >2B=' H@' (B B ,2' 1 , >B2' " B ?6

0;' * E 0 < :' $ D,= B (B B ,2' C>, ' $B >>@' G
BE:' , ;B:' . <2> ; , BO' =B' 1 ,= =:' 2 , R,:' , ,H >B <O'
' @' %, ?B <O' =B' # 0; B , => , 66666666666666666666666666666666666666666666666666

=' * E 0 < :' $ D,= B ' C<0B' E,O' G
,R,=< BO' =B' <2B=<:' +,E ,:' 0;' , =' =' >00, O' < ' #0; BY
,=> ,' 66666666666666666666666666666666666666666666666666666666666666666666666666

L :4P

=' * E 0 < :' $ D,= B ' 1 D>B2' 1 , ?2 G
1 < ;B0,:' B@ ,:' , ; ,D<:' + ? FB:' < =<E,:' 2?, ; , ,' 6

O;H' * E 0 < :' <2< B2' . 6' 0< <' G
,R,=< BO' =B' (, ,=,:' (, ,=B <O' =B' "B , =<' . :' ",
?0 <:' %>0 ; , ,:' # 0F, 66666666666666666666666666666666666666666666666666
' D> O' U ;A' , ; 22B @ B :' , H < > ; 66666666666666666666666666666666666666666666666666 :
,FFB 0:' e ?6:' <' D> BO' D EB :' FB A, FO66666666666666666666666666666666666666 P

(B B ,2' <; ,2' 5:4

2 ?' , ;B ,20' < ' UA ?A' ;AB' ,H<EB' < D, R, ; < ' A,O' HBB ' B?< 0; >?;B=' , B' G I J <220' < ' . B BD, 0800', @:' HB < B' ;' U,O' N< B=' H@' #D> ,800' B < ?BY B ;O6' I J <22' < ';AB' B < ?B B ;O' 2B=' H@' #D> ,' IF ;B=' ' FFB = W') <6' . J6' I J (<00' ;<; ,20' < ' B, ?A' = E 0 < :' U ;A<>;' 2 0;' < ' ;AB ' ?< F< B ;' H, ; ; ,2 < 0:' F B0B EB=' ' ;AB' 1 ,= =' . , ' ?B6' IOJ ' < D' 0; , ;B' < ' ;AB' , @' ; , B ' < ' * B?6' ' G ' ;A O' ;AB' = E 0 < O' < ' %, ?@' , =' 3 , @ , O' , B' , ,2D, 6, ; ?=:' , =' ;A, ;' < ' C, ?< B' A, O' = 0, FFB, B=:' ;O' U B? O' A, E D' HBB ' = 0; H>;B=' , < D' ;AB' B , D' 0 W' = E 0 < O6' I J' AB' BD B ; , 2' , ,20' ' ;AB' < =B' =B' 2< , =800' D B, ;' A 0;< @' < ' ;AB' F, 0A' , @6' ' < ;> , ;B2@' ;A O' < 2@' 0B EBO' < ' ;AB' BD>2, ' BD B ;0:' ;AB B' HB D' <' B?< =' < ' ;AB' , ;BO' < ' ;AB' 2 ; ,' H, ; ;?, 2 < O' < ' ;AB' BU2@ , 0B=' E<2> ;BB ' BD B ;O6' ' , ' 0FB? , 22@' > ?B ; , ' , H<>;' ;AB' , E, 2 @' , =' ;AB' ;A' * E Y 0 < ' IC, ?< BJ:' UA ?A' 0BB O' ;<' A, EB' HBB ' ?< F<0B=' < ' ;A<0B' #0; B , => , ' > ;O' UA ?A' A, =' <;' HBB ' < D, RB=' ,O' ;AB' K . , D>, =6' , =' K 4;A' * E 0 < 6' $>;' ;' , 2 <0;' ?B ; , 2@' A, =' 0< B' =, 2>0 , ' BD B ;O' , ==B=6' ' , ' ;AB ' U ;A' ,' I6 J6

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<) I <>2;J 7
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;A % DB : P;A % B I H, ;;06 B, ?AJ: 4;A % B I H, ;;06J 6 6 6 P 0: 5 0:4 4

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5; A: IJ5; A: 4P; A % B
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=) I 1 B B; J , ;
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* ,D<< 0:' =' + <Y
E 0 < ,2' A,00B> 06 6 P5 : ,Z- :P 4 4 :OP

=') ' I+ <J' ,;'
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;,2, 0G 0;', =' ='
<C5% ' O;A:' ;A:' ;A'
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* ,D<< 0' < ') ,F<2B< P' =P 'B > > 5: 4

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B , 0' < ' 1 < <80' , ='
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' H,;;6 B,?AJ7) B,
3<2;, 0V 0;', =' ='
B' ' H,;;06 B,?AJ7
&B0;FA,2, 0' V' =:'
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H,;;06 B,?AJ:' 0;', ='
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F<2;, '% DA;6' < 0B' 6 0 P: 5 0 P 4: 5 55 0:

O;A') ' I*>AB0 BJ'
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" B ?A' V'4;A' % B' '
H,;;06J:' 4;A', =' ;A'
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=' U 00' ' H,;;6J6'
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B H,;;6 B,?A < ;A: 5;A: ;A % B: 5 % '(.% 3 % , =' K D ' 33 : 6 3 %(66666666666666666666	5	0:50	: 55	: 0	5:0
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9 52.-' I 2 .* 5-N
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T) <;'0; , ;B=0BF, , ;B2@6 2Z ;AB ; 22B @ < ' ;AB @ < ' +< ;>D, 2 0F2, ?B=
> =B' < B AB, = ' ;AB B;> ' < ' 1 , ?A' .' , = <;' = 0; H>;B= ;< ;AB ?< F06

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;A' % D B' IO;A' A, ; ;6J' 6 :' 6 4 OO 5 O ; 6
O;A' % D B' IO;A'A, ; ;6J' 6 6 6 P O O ;

$ D,=B' ,>F ' 7
;A' %B DB ' IO;A'A, ; ;6J' :' 6 6 2 4 O
O(;A' % D B' IO;A'A, ; ;6J' 6 6 6 OP 5 ;
4 ;A' % D B' IO;A'A, ; ;6J' 6 6 : 5 P ;

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$ D,=B' A< B BO' G
P6 ;A' % D B' I 0;:' =:' =:' O;A'
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BD B ;' =B' + >00B' 6 6 6 5 5 4 O O

* E 0 < ,2' <;, 2 PP P:5P 4 O:4P O: O

,E,2 @' * E 0 < ' (B 6' ;B6' '7
0;:' =:' O;A:' 5;A:' O;A:' P;A

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; 22B @:' , :' # D BB 0' 6 : 4 5POT : T k
; , ; 1 , N< 66666666666666666666666666 4 V P5 V 4 V

(B B ,2' <;, 2' < ' < 8F0 P P: O P : P O 5 5:

;' $ @' 1 , ?A' ';AB0B' 0 W' H, ; ;, 2 < 0' A, =' D<;' 0< UB, ';A, ;' ;AB ' ?, = BO' A, =' HBB ' 0B ;' H, ? ';<' " , ?B:', =';AB' B , D' , ', =' 2B' UB B' HB D' = , ;B=' ;<';AB' BD B ;0' < ';AB' =' < F06

T' AB0B' BD B ;0' A, =' =B; , ?AB=';AB ' O;A' H, ; ;, 2 < 0:' 4 ' , =' 4 ' 0; < D' B0FB?; EB2@:';<' < ';AB' D, 0< ' < ' >=, =' <= D<6

T' % B' ;AB' ;A' < F0:' ;AB' ;A' A, =' B?B EB=' F, ;' < ';AB' (B B ,2' +, ' < ' ;AB' , @:' , =' , H0< HB=' ;6

^ H<>;' 4' < ?B 0' , =' ' B ' A, =' HBB ' = , ;B=' ;<';AB' D, 0< 0' < ' 2 B =, ' , =' <= D<6

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$ D,=B ,E < 0G
';2 * ,D<< 0_66666666666666666666 P 0 4

$ D,=B , <G
;A , =' ;A * ,D<< 0 6 6 4 :6 P5 4 : 0
T
< 0B ; 22B @66666666666666666666666666 50 0 P k

* E 0 < ,2 <;,2 0 : 4 0 :P5 4 : 5

6 \ ; 22B @ B0B EB:' , :' , ='
D BB 0 <;' ,;;,?AB=' ;<
, @ ?< F0 66666666666666666666666666666 0 : 0 : 0P 4 :4 K
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Cj;,; 1,N<' < ' ;AB' @' , ='
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<;,2 < ';AB' UA<2B' @ :04P P : 4 : 00:0 :5P 0 :00

(V ' * B?6 P (B B ,2 (, =, B H <>DA;' >F ;< ;AB' < ;' ;AB'
0 P;A' % B' < D ,22@ 2B ;' ,;' >=,=' <= D<:' , =' 0< B' = , ;0:' , D'
' ,22 : 5 ' B 7 ;AB0B' , B' ?<> ;B=' ' ;AB' D> B0 < ' C, 6 :' 6
' "BH6 ' (B B ,2 "<@' H <>DA;' >F ' ,' 0 2, ' ,0A < ' : P ' ?< E,Y
2B0?B ;0 , =' = , ;0G ;AB0B' , B' ?<> ;B=' ' ;AB' D> B0 < ' 1 , ?A' : 6
AB' 2<00B0 < ';AB' < D ,2 P : ' B ' UA<' B ;B B=' +< ;>D,2 UB B' ;AB BY
< B' D B, ;B ' H@' : ' ?,0>,2; B0 ;A, ' 0 0A<U ' ';AB' ;,H2B6 AB' ? B,0B'
' ;AB' > HB ' < ' 0< B' BD B ;0 IB6 D6 O4;A' % B' , =' ;B6 < W80
* ,D<< 0J' HB;UBB ' C, 6 ' , =' 1 , ?2 ' ' 0 ;A>0 BWF2, B=6 ' ;2 B'
< D ,2 : ' < 2@' O : ' B , B=:' <;' OO: :' < ' 1 , ?A' : 6
2 B B' 0 , <;AB ' !' B;> ' 6 ' ;AB' ?A EB0) ,; < ,>W =,;B=' BF;6 4'
UAB B' ;AB' D> B0 , B' 02 DA;2@ 2<UB ' ;A, ' ;A<0B' D EB ' ,H<EB:' ;AB' ;<;,2
> D' ;<' P : ' B B?; EB0 F B0B ;' 0;B,=' < ' P : 6 * B' : ' B '
=B ? B ;' BF B0B ;' ;AB' 0 ? :' 0; ,DD2B 0:' B;?6 HB;UBB ' BF;6 ' , =' BF;6 46
2B' B?< =' < F0 < ' BW, F2B' B;> 0 5P K 0 ? ' F B0B ;6 ' ,== ; < ' ;<'
;0 P:PO ' K B B?; EB0 F B0B ;68 2 B' : ' BF B0B ;' ;2 B B < B' ;AB' BW,?;'
DA; D < ?B' ,;' $>00,?<6

' AB' =' * ,D<< 0 2B ;' < B' 0M>,= < :' 4 B :' ,;' 2 B =,6
T AB' ;A' * ,D<< 0:' ;AB' <;AB ' BD B ;0 < ' ;A 0 H D,=B:' 4 ' 0; < D:'
A,=' HBB ' 2B ;' ,;' >=,=' <= D<' > =B ' (B B ,2 (, =, B6
^ H<>;' ' , ; 22B @ B ' 2B ;' ,;' >=,=' <= D<' , =' 2 B =,6
* A 0 ??2>=B0 <;' < 2@' ;AB' < D ,2 B0B EB' , ; 22B @:' F, :' e?6:' < ' ;AB'
, @:' H>;' ;AB' UA<2B' < ' ;AB' , ; 22B @ < ' ;AB' ;A BB' ?< F0:' UA ?A' 0 <;'
= 0; H>;B=' , < D' ;AB ' ' ;AB' B;> ' < ' 1 , ?A' :' 6

) 6$6V) <' " B ?A' B;> ' D EB0' ;AB' OO;A' #M> F,DB' =B' 1 , B:' UA ?A' ?B ; , 2@' , ?AB=' U ;A' 1 ,00B ,' < ' BF;6 6 A 0' ,E,2' H,;;,2 < ' < ' 5 O' B ' 0A<>2=' AB' ,==B=' ;<' ;AB' ;<;,26

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,5,=< B0' 4 4 P

=' = ;;<' 6 < 0 5

,E,2 @' V' 0;'

'>00, N96(6%6:'

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* ,D<< 0 = 4

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AB' ;<;,2' ';AB';BW;:',0' ' & B22 D;< 80' = 0F,;?A:' 0' U < D' HB?,>0B' < ' ;AB' < 00 < ' < ';AB' P' U<> =B=' < ';AB' 2 =' UA<', B' 0B ;B=' < ';AB' BD B ;,2' B;> 0:' & B22 D;< ' ,=B' <>;';AB';<;,2';<' HB' 46

/

& #%%) ( ) 8 ' 1 !' ' $ ' :' # + 6' 4:'

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' ?< F, @' P ;A' "<<; 04' C

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0;' % B' H,;;6' 96(6%6666666666666666666666666666666 P '

=' ' ' 6 6 6 6 OP

;A' 4' ' 6 6 6 6 OP : P

;A' ' ' 6 6 6 6 O O 5

*B;,?A B ;' % DA;' $,;;06' 96(6%6' 6 5

OP ++#) * #

O;A * E 0 < : 1 ,N< (B B ,2 8

2BW6 , FHB228O $ D,=BG L %(' %

4;A "<<;: =H,;;6666666666666666666666666666666666666666666666 5

;A ::' 0;' ::' 6 6 6 6 6 0 5

P =' ::' =' ::' 6 6 6 6 6 00

' ?< F, @' P ;A "<<;6' 6 6 6 6 =

9B O8O $ D,=BG

4;A "<<;: =H,;;6' 6 6 6 6 6 6 O 4

O ;A ::' 0;' : : 66666666666666666666666666666666666666 0 : 4 6<

54;A : : 66666666666666666666666666666666666666666666666666 4 05 J c 8

' ?< F, @' (;A "<<;66666666666666666666666666666666666 0

<22 O8O +< ;>D>BOB $ D,;2?G

;A % B I;U< H,;;O6J 6 6 6 6 6 :O6

=' ' 66666666666666666666666666666666666666666666666666 :0 : O 'L

"<;,2 < 'O;A * E 0 < 4: 5 4:0

;A * E 0 < : (B B ,2 < 'G

$, BO8O $ D,=B'G

0;' "<<;:' =H , ; ; 6 66666666666666666666666666666666666666 4

5;A ' 0;' 66666666666666666666666666666666666666666666666666 : : 45

: ;A ' =' : : 66666666666666666666666666666666 5 0 4

F @8O +< ;>D>BOB' $ D,=B'G

=' % B' I;U< H,;;O6J 6 6 6 6 6 v : : O

;A' ZZ ZZ 6 6 6 6 6 v 5 : 5T

8 < , ' 1 2 ; ,' I,;;,?AB=J 6 6 6 6 v

%>0 ;, , ' %BD < ' I;A BB' H,;;O6J:' $, < ' #HB T' 6 V : O 5 ` 4

;A' % B' I;U< H,;;O6J6 <2< B2 * <>D2,0 V

<;,2 < ' ;A' * E 0 < 50 4:

2 DA;' * E 0 < :' $ D,=B (B B ,2 , '

$B? U ;A8O' $ D,=BG

O =' "<<;:' 0;' H,;;6' 6 6 6 6 0 0

5 ;A' ::' ' I <> ' ?< F, B6OJ 6 0 : 5PT

: =' +< ;>D>B0B' , ,=< BO' 6 6 6 6 V

$, ?2,@8O' $ D,=B'G

=' "<<;:' 0;' H,;;6666666666666666666666666666666666666666666666 5 50

5 ;A' ::' ' I <> ' ?< F, BOJ' 6 : 5 T

0;' +< ;>D>B0B' , ,=< BO' 6 6 6 6 V 0P

<;,2 < '% DA;' * E 0 < 5 : 50 :4 4

8' ';AB' +< ;>D>B0B' BD B ;O' ;AB' < ?B O', B' ?<> ;B=' 'U ;A' ;AB B 6

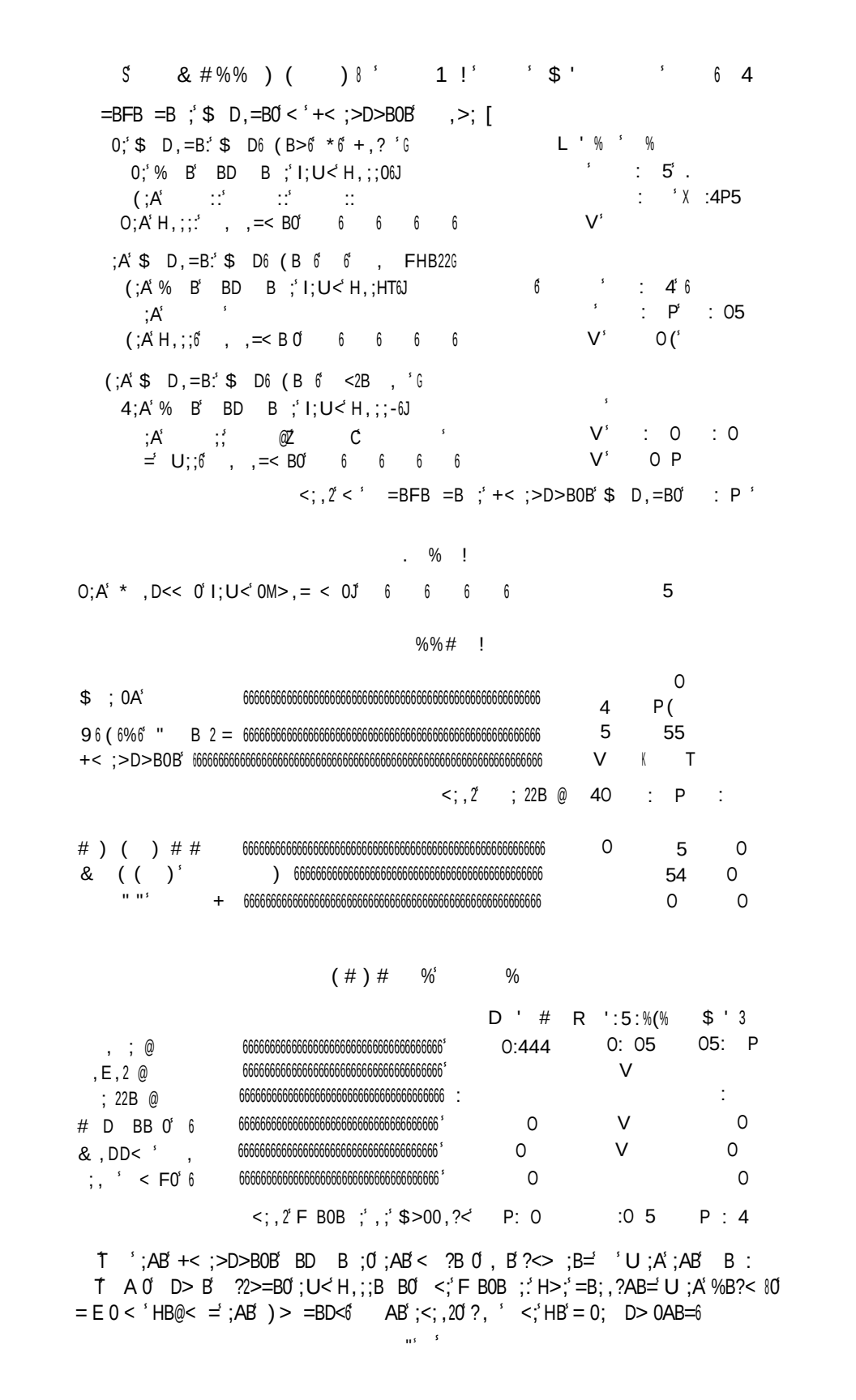
%B ;A' 'A O' BF< ;' I & B22 D;< :' 9 :))3% % ' ;' 1 () ' #%('E :' P PJ' D EB0 '

;AB',H<EB' H D,= D6 AB' +< ;>D>B0B' < ? ,2 2 0;' < '; <<FO' F B0B ;' ID EB ' H@'

< , <' =,' %>R:' J' F>;O' #HB ' ,O' ?< , = D' , ' FB B?;' H D,=B:' ?< Y

0 0; D' < ';AB' ;A' % B' < 2@:' UA 2B' ;AB' %>0 ;, , '2BD < ' O' D EB ' ,O' ,' 0BF, ,;B'

* -' .-' % B>;6 <26' (, ;:



O ' ++#) * # ' A

) 6$6V ;' ,@' HB' ?<>EB> B ;' ;<' D EB' AB B' ;AB' 2 0;' < ' ;AB' > ;0' < '
B22 >D;< 80' B2=' , @' UA ?A' UB B' "F B0B ;' , ;' ;AB' H, ;;2B' < ' $>00 ?<7
;AB0B' UB BG V

O ' . % E' G

*B' (B@80' $ D, =B' G L 6' %
6 =' * ,D<< ' (>, =0 ' 7QC
O;2' * ,D<< 0' I;U<' 0M>, = < 0J 0' W7 @A @B
I) B, ' 1 B, 2A, =, 6J

6 2, =B80' $ D, =BG
0;' * ,D<< 0 ' 6K'
O;A' % D2 ;' * ,D<< 0' 4' O 4' = C 0#

0< 80' $ D, =BG
(;A' % DA;' * ,D<< 0 ' OO'
0;' >00, 0:' 9 6 (6%6 QJ' O ' C --9
I$<;A' B, ' 1 B, 2A, =, 6J

", B80' $ D, =BG
;A' % DA;' * ,D<< 0 5' O O

' 4' I> =B ' ", BJG
0;' BD B ;' 6 6 6 6 V' O
O;A' ' 6 6 6 6 V' O
;A' ' 6 6 6 6 n' :O
;A' ' 6 6 6 6 6 V' O
I 22' HB@< =' ;AB' 2E, ' ' ;AB' = B?; < ' < ' A, >0?, :' e ?6J

< ; ' +< ;>D>B0B' * E 0 < ' G

$, = < =80' $ D, =B' G
;A' % B' BD B ;' I;U<' H, ;;06J' 6 6 ' 44J
;A' ' V' : 4 '
;A' H, ;;6' , , =< B0' V' 6O '

1 2 ; ,' $ D, =BG
BB' BD B ;0' I =, A, :' ,0;B22< $, ?<:
< . 2A, <J' 6 6 6 6 V' '

O:

I ;' , =' , H<>;' +< ;B' =B' 1 > ?B22, : , =' HBA =' ;AB' 2E, 6J

' D, 0< ' , ;' % 0H< :' ;2 ' "<<;:' =' H, ;;6' \
' , ?A' < ' % 0H< :' ;A' ::' ' ' :
;' , E, :' ' ?< F6' 9 6 (6%6
? 6666666666666666666666666666666666666666' 6 V' P:PP
K' ' ?< , =' 8' 6 6 6 6 6 V'

' ;AB' B , D' +< ;>D>B0B' BD B ;0') <06' ' , =' 4' UB B' , ;' #A , 0:'
) <6' ' , ;' , = R:') <6' ' , ;' H , ;B0:') <6' O' A, =' HBB ' ; , B ' F 0< B ' , ;'
2 B =, 6' AB0B' , B' <;' F, ;' < ' ;2 B' B2=' , @6
AB' ;<;, 2' < ' ;AB' , ?; < 0' < ' ;AB' B2=' , @' <;' F B0B ;' , ;' $>00, ?< U, 0'
5: 6

S &

/

1 #) * # " $ '

I 6

@ 2 - S S4\ 2 2 2H - -0 2 - 0 - 2/2 . * *
6. 0 62 2 - - * -(

2,7 _T < FO , ; ; , M>? , 2, = < ;< =< , =B < ? BG ;? ;B , , ?<; < B;=< ?<>FB 2, 2 <: < N , E 00, ; =<0 F< ;0 =< 2, < ; , D B 2B F2>0 , ???00 H2<6 @ , E? , F, > < < =< W ?<2< <0: ? 0B , 0, ; F B?B=< F, =?0 ; , 22B> 06 ' B 0 , EB 0> 2B 0< B;=> F< ; M>8 , > , =B? =B =8, ; ; , M>< : 0< < B , ? ?<2< ?0? B?: <; =?0?< = , F, 2, ? B;? =< 2, < ; , NN < 0> 2B ?2 < =B < H <6 2,7 F< ; < 2 =?E , 0 , B;? <0; 2B < EB ; =B 3 2 , > , 0< ; =?0B < B > B B0B EB: F<> 0?0<>;B , HB0< 6 < , ; 22B ?0B , = 0F<0BB =B , B ? F<>E< ?< ; BH, ; ; < ?<2 ?0 =B < < : B; , 2> 0B E =< F< ; =8, FF> 6

%? _8 < FO , ; ; , M>? , F, 2B0 =B>W ?HB 0 M> ?< => 0B ; 0> 2, <>;B =B < H B7 > B =B 0B0 = E 0 < 0 < B , B0B EB: B; 0< , ; 22B B 0B , F2, ?BB F, = B B ;B0 F<0 ; < 0: F<> F<>E< 2B 0<>;B , HB60< 6 16 2B 1 , ? ?H, 7 / B@ = 0F<0B , 0B0 =B>W ?<2< B0 =8, ; ; , M>B =B , B B , =< B M , = 2B (B B 2 ' B@ ? 0B , , ; B =?0 A, >;B> 0: B; M>8 2 , ?A? , 0> 2B < EB ; =B D B 0B , , 16 2B 1 , B?A, 2) B@ , F B00< 0< , ; ; , M>B 08 2 E< ; M>B B B 08, E, ?B F<> , B > <>EB B ; 0> 2? (B B , 2 B@ B : <> F<> , B > <>EB B ; =B ?; , ; B I6E J6 16 2B 1 , B ?H, 2 B0; ; <F FB B; B =B 8, F <F<0 =B 0< <>EBY B ; F<> M>8< 2B 2> =B;B B6 0B B , F B?B=B F, 0B0 ; , 22B> 06 EB 0> 2, B;B =B 2, < ; , B 2 0B B;; , B H, ; , 22B F<> 8B 0B H2B =?0 <>EB B ;0 >2;B ?> 0 =B 8, B6

%B o^ < FO 0B , 00B A2B , B , B B =? 1 <> , , I AB> B0 => ; , ; 6 @ F B = , F<0 ; < : B; B , =B0 = 0F<0 ; < 0 F<> 0<>;B , >HB0< 2B0 ?< FO =8, B? , ; ; , M>, ; 0: B; F<> , ?AB 2> B B , 8B >B 6

< , ; 22B B 60B , FA, ?B? =B , B B , , B;B 8? B 08 2 , 0-, ; >> <>EB B ; B , , ; 6

%, B0B EB =B , E, 2? B 0B , F2, ?BB 0> 2, <>;B =? < H B: B , B B B; , > ?B ; B => K_^ < FO6

%B 1 , B?A, 2 + ?B =8#002 D G D 3

<F ? ?< < B G %B (B 6 =? = E 0 < $6) 6 " < 6
+<> 0< #W?B22B ?B 16 2? =>B =8 H , ;BO6

0; , DB FA , 0B6 <U ?<>2= ;AB B B @ , =E, ?B < =B ;< , B <EB B ; < B; B, ; 8 Z

/

% # $ '

W 33%. M : .%. %% 5

L % (L % ' L % %% ' $ ' 3

0;) I FB ?B J7

;<F < =8Ø $ D,=BG ;

0; <2=0; B, (>, =Ø 6 V

2 =(>, =Ø 6 6 6 6 V V V L

$2, ;@ B8Ø $ D,=BG

O;A "<<;: =$,;;6 6 6

O =(6 6 (V V (

P 0; 0;::

%<UB8Ø $ D,=BG

0; % B H,;;6 96(6%6 V 6 V 5

= 5

;A ::: :: V V 5 V

;A ::: :: 5 5

% DA;< F, BØ 6 6 V V V

+, B A, Ø $ D,=BG

4;A "<<;: 0; H,;;6 6 6 V C V V 0

45;A V 4 0 P

* E 0 < ,2 %<00 0 0

=) I 22J6)< %<00BØ UA,;BEB 6

=* E 0 <6E I+ ?;< J6

1,? < 8Ø $ D,=BG

O ;A "<<;: 0; H,;;6 6 6 0 5

4O;A (

;A :: 50 V 0

% DA;H> B8Ø $ D,=B7

;A "<<;: =H,;;6 6 6 4

P ;A ::: ;A 6 6 P V 5

= = 6 6 V V 6 0 V V

A, F2B < =8Ø +< ;>D>BOB

$ D,=BG

5;A % B I;U<A,;;O6J 6 6 5

6O; I< B H,;;6J 6 Ú P4 4

* E 0 < ,2 C6 J00 4 0 O4

O;A) I <2BJ6)< %<00BØ UA,;BEB 6

;A) I%B ;AJ G :

$, BO8Ø $ D,=BG

0; "<<;: =H,;;6

5;A 0; ZZ 0

;A ::= Q v 4

AB D B,;B F, ;< ;AB 2<00BØ < ;A Ø H,;;,2 < UB B ;AB ?< F, BØ ,;;,?AB=;<<;AB H D,=BO:H>;;AB;<;,2 Ø 0B ;B=AB B6

/

" #) ' % # ' ' $ '

W 33% .
') (% (M : .% . $ ' 3
L % (% L % (%

'

3 G ; ' * E 0 <
, >;8Ø $ D , =BG
='%B DB 66666666666666666666 P 5
P;A'% D B' 6 6 6 6 44 0
(, =< DB8Ø $ D , =BG N
O;A'%BDB 66666666666666666666 J 0
; 22B @66666666666666666666666666 V V V
* E 0 < ,2' <; ,2 5 44 04 5 : 0

E SN- ; ' * E 0 < 'G
"<@8Ø $ D , =BG
4;A'%BDB ' 6 6 6 6 I 4
4 ;A'% D B' 6 6 6 6 ' O OP 4
, >=8Ø $ D , =B7
0;'%B DB 66666666666666666666 P4 4 5 5P
O4;A'% D B' 6 6 6 6 V
; 22B @66666666666666666666 V \ V
* E 0 < ,2' <; ,2 0 40 54

< FØ' <<FOG
D BB O66666666666666666666
, 66666666666666666666666666 V V
(, =' 8<; ,2 P : O :

X ;B='G 0 G Ń ,2=B B:' ?;6 6S

C>0Ø B;> ' 8< ' ;AB'@ # 2%(' . ' ('% ' . '3 ' 8 : % %' < ;Ø';AB' #; , ; '
1 , N< :' UA ?A' A , =' < B' < ?B ' 22B=' , =' <> ' U<> =B=:' , =' ;AB' , E , 2 @:'
UA ?A:' ;A<>DA' ' B0B EB:' A , =' 0< B' 02 DA;' 2<00B0:' < ' 1 , ; B 8Ø ?@('% . ('
L % (' 0A<UØ' ;A , ;' ;AB' ;A' * , D<< Ø' , =' ;AB' 0;' >00 , Ø' A , =' B , ?A' < B'
< ?B ' U<> =B=:' , =' ;A , ;' + B B' <>2;' ;AB' DB B , 2' ?< , = D' ;AB'
H D , =B:' U , Ø' , 20<' A ; 7 F <H , H2@' ;B ' < ' , ' =<RB ' ?, 0> , 2; BØ' , < D' ;AB'
B ' , TB F2 B=6' $ >;' ;AB' ?, 0> , 2; BØ' >0;' A , EB' HBB ' EB @' BU' ' ;AB'
<> ;B=' , 6' " < :' 1 , 00B , 8Ø' ?A B ' < ' ;AB' ; , :' 0 , @Ø' ;A , ;' ;AB'
F 0< B Ø' < ' ;AB' 0B?< =' ?< FØ' ?, B' ;<' 6 ' < ?B Ø' , =' O5' , ' , =' 2B:'
, @' < ' ;AB ' U<> =B=6' ' 0<:' ;AB' 22B=' >0;' A , EB' , <> ;B=' ;<' '
< ?B Ø' , =' ' B 6

L " #) ' % # ' ' $ '

W 33%. N ' .%. $ ' 3
L %(' % L %(%

: ' '

1 ? 9<8Ø * E 0 < 'G

61, ?> ?8Ø $ D,=BG
;A' %a DB 66666666666666666666 L 4 P
<;A' % D B' 6 6 6 6 00 0 P 0

1, ?<D B;8Ø $ D,=B'G
6 0L;A' % D B' 6 6 6 6 5
4P;2' % D B' 6 6 6 6 4 0, 5

* ' 0 < ,2' <;,2 0 0 P 5 5 4

619 61; 8Ø * E 0 < 'G

$, =B;8Ø $ D,=BG
;A' %BDB ' 6 6 6 6 V < V
4;A' % D B' 6 6 6 6 V

N,H:,6a0BB8Ø $ D,=B'G
I ;A:' J;AJ' <' 2<6-0BØ 6 V V

* E 0 < ,2' <;,2 V ' 0

< ;' * E 0 < 'G

< 8Ø $ D,=B'G
(;A' % D B' 6 6 6 6 (4
%BD < '=>' 1 =' 6 6 6 4
%BD < ' , <E B B' 6 0 (4

"B B@8Ø $ D,=B7
=' %BDB ' 6 6 6 6 L ' 5
((;A' % D B' 6 6 6 6 6
=' % D B' 6 6 6 6 0 0

* E 0 < ,2' <;,2 0 04 0

H> %3 N 'G V V ' V

(, =' <;,2 0 : P 0 P

)< B;> ' < ' ;2 B' ; 22B @:' F, ;' < ' UA ?A' U,Ø B D,DB=' HB0 =B'
1<> ,:' , =' >0;' A,EB' A,=' ,' BU ?,0>,2; B0:' 2 B' ;A,;' < ';AB' =' < F06
" ' ' C> <;8Ø ?< FØ A,E D' HBB ' ' B0B EB:' UB' 0A<>2=' <;' A,EB'
BWFB?;B=';<' =', @?,0>,2; B0:' H>;' 1, ; B 8Ø 2 0;Ø 0A<U' ,' BU' < ?B 0V'
EB' ',22 V A ;:' ';AB' ;A' , =' (;A' % D B:' HB0 =BØ , ', =B =B ?, F' < '
2,>0B2' U<> =B=6 A 0' >0;' B, ';2 ,;';AB' ?< FØ ?,>DA;',' BU' 0; ,@' 0AB22Ø
UAB ' ;' U,Ø H <>DA;' >F6;<' ?<EB ';AB' B; B,;' < ') B@8Ø <>;B=' = E 0 < 06 ;'
U<>2=' HB',' > ';<' B0; ,;B';AB' 2<00BØ,;' 0 W;@6 A BB' < ' 1,00B ,8Ø
. '(' .%' H ' ' ', =', ' < ?B ' < ';AB' (, =' +, :', B',20<
B ; < B=',Ø U<> =B=' ' 1, ; > B 8Ø 2 0;06

AB';<;,2' < ';AB' " B ?A' 2<00BØ;AB B < B' >0;' A,EB' HBB ' M> ;B' O:P '
22B=:' U<> =B=:', =' 00 D6 B' B;> ',??<> ;Ø < ' <' F 0< B Ø < '
;AB' P;A' < F06 $>;' (B B ,2' < ' U,Ø ?B ;, 2@?,F;> B=:', =' AB' Ø <;'
2 B2@';<' A,EB' HBB ';AB' (3%' F 0< B 6

) 6$6V \ B22 2D;< :,Ø;U 22HB <;B=< F,FBO :0,@Ø;2 ,;2 B H,=< 2@
56 $; 0A 0,H BØ, =H,@< B;Ø B,=@;<;, B;HB< B 0 EB,;; Ø=,;B6
22Ø,FFB, Ø;<HB, > =B B0; ,;B 7 H>;; >0;HB B B HB B=;A,;
2 B I,??< = D;<A Ø ?>0;< J< 2@?<> ;Ø , , =2B:< ;; D< ?B 06
1 < B<EB :;AB;U<H,;;,2 < Ø <;H D,=B=: 2H, = ;H:< D;2 B
D, 0< < <;AB % 60H< < ;0:;HB D> B Ø I,H<>; J ;AB < ;0:, =
;AB , I,Ø < ?< H,;, ;J, B,20< < ;;B= A Ø ?,2?>2,;< :0<;A,;
56 Ø <; , <>;6

6 8 C2 ' (' # 2 28 IB B?; EB: U ;A<>; 0 ? < =B;,B2 B=J

229 ?) g 5:

L % 6
g %:
> 4 < R 6% '

260;$ D,=B I+,? JG 0;, = C;A % B:O;2 ,I:,=< BØ :
= $ D,=BT I"< 0B?,JG = , = O;A % B :O Ø
= $ D,=B ILT+T@J = , = ;A % B 6 : 6
O;A $ D,=BT I ?A6 , FHB22J G O;A, = ;A % B 6 :O 4
;A $ D,=B I 6 , FHB22J G ;A, = ;A % B, = ;A , ,=< BØ :OO
(;A $ D,=B I <2B , JG 4;A, = 5;A % B:, = = , ,=< BØ 6 : 5I7
4;A $ D,=B ^I$, < # HB JG ;A % B: 0;, = = %>0;, ,
%BD < 6 6 6 6 6 6 6 6 6 6 6 :
;A $ D,=B I >;;< :E ?B A, F2B < =JG 5; , = 0;% B 6 :5
5;A $ D,=B^I <22 0:E ?B , EB@JG ;A, = 6 = % B 6 6 : 6
0;, = = , ,=< BO:,;;,?AB=;<%DA;* E 0 < 6 6 6 5 O
;A % B^:,;;,?AB=;<%B?< 8Ø 1 2;,* E 0 < 6 6 6 :

<;,2 BD>2, , ; @ 6 : O

7 +F+D 4 + ;) -
%0;:O;2:4;A: ;A BD B ;0666666666666666666666666666666666666666666666666666 : 5
7 4 I5H,;;B BOJ6 6 6 6 6 6 4

<;,2 BD>2, Ø< ,22 Ø 6 O:6 6 5

) 6$6V 2 B +< ;>D>B0B BD>2, Ø H,=:<EB , = ,H<EB ;H?60B O:6 6 5< ?B Ø
, = B F B0B ;U ;A ;AB ?<2<> 0: : B 0 ? , = =B;,?AB=6

T AB0B ;U<H D,=B0: < D , 2;< 8Ø = E 0 < : UB B ,2U,@Ø ,?; D
U ;A 228Ø $; 0A * E 0 < 6
_ "< D F, ;< %B ;A8Ø ;A * E 0 < 6
^ "< D F, ;< 2BW6 , FHB228Ø P;A * E 0 < 6
T "< D F, ;< + ?;< 8Ø = * E 0 < 6
^ "< D F, ;< <2B8Ø O;A * E 0 < 6
^ A Ø BD B ;: U ;A ;AB ;A % B: < B= $,= < =8Ø H D,=B < %B?< 8Ø
+< ;>D>B0B = E 0 < 6 $>;;AB 6 ;A U,Ø,H0B ;: D, 0< ,;H , ;B06

AB0B' > HB 0' , B' F <H, H2@' ,' 2 ; ;2B' <EB 0; , ;B=7 < ' "BH6 ' ;AB' UA<2B' . , D> , =:' ??>= D' ;AB' H , ; ; , 2 < 0' 2B ;' H?2 =:' A , =' < 2@' : (4' B B?; EB0:' , =' ;AB' UA<2B' =' * E 0 < :' ??>= D' ;AB' <> ' H , ; ; , 2 < 0' 2B ;' ' #0; B ' , => , :' < 2@' : 6 ;' 0' F <H , H2B' ;A , ;' ;AB' U , 0; , DB' < ';AB' F, 0A' ; <<F0' UAB ' 0 =B' ;AB' % B0' U , 0' <;' 2 , DB:' , =' ;A , ;' < ') <E6 ' ;AB' UA<2B' < ' %6 ' 2< , ,80' 0 W;BB ' H , ; ; , 2 < 0' = =' <;' , B' 4: ' B 6

%' "' # (' % ' + ')' #' %) #

7 6666666666

(;2 < F, >@:4;A H, ; ; , 2 < 6 , F; , (6 A< F0< : UA ?A H, = , E?92
1 , ?A 56 X+ B0B ; =B0 D , ; < : ;A $, ; ;B @: 6 " 6 6S
4;A < F, @: ;2 H, ; ; , 2 < 6 , F; , 6 % , U0< : UA ?A A, = , EB=
BF;B HB 6 X+ B0B ; =B0 D , ; < : 4;A $, ; ;B @: 6 " 6 6S
AB B UB B , 20< F B0B ; ;AB +B 0>2, : H>; <; ;AB $>00, ?< ?, F, D 6 V
0; < F, @: O;A 2>; ; , 2 < : , F; , C6 , U B X <U 4 = < F, @:
6 (6 6S6
;A < F, @: ;A H, ; ; , 2 < 6 , F; , + 6 1 B, =<UO X, BW; ?; > ;S6
$<;2 < UA ?A , EB= , ; % 0H< ?;<HB : , = U, ;B= ;AB
< B0 . B= , 0 % B0 < ;AB B; D , @: A6, E D ?< B ;<< 2, ;B < ;AB
B2= <FB , ; < 06 20<
0; < F, @: ;A H, 2E, 2 < : $; 6 1 , N< 6 $ B= X <U 4;A $, ; ;B @:
6 " 6 6S6
= < F, @: 0; H, ; ; , 2 < : = , F; , 6 $, E B0 X <U = $, ; ;B @:
6 " 6 6S6
;A < F, @: ;A H, ; ; , 2 < 6 , F; , " 6 (2>HH X <U O ;A < F, @:
6 (6 6S6
22 < UA ?A A, = , EB= 5 6 $>; $, @>B0 0 H, ; ;B @ A, = <; ; , B ;AB B2= 0 ?B , 2, EB , : , = $ B= 8 0 , = (2>HH8 0 XH<; A ?< F2B; BS A, =
<; D< B ; < ;AB < ; 5 < = 6 2 B@ A, = , 22 2, U ;A ;2 B
% B0 0 ?B ;AB U ;B < 5 6
, == ; < ;AB B U ? B EB H, ; ;B B0 U ;2 (, A, 8 0 < ?B , ; , = R6
;A < F, @: P;A H, ; ; , 2 < 6 , F; , 6 UB X <U (< F, @:
6 (6 6S6
P;A < F, @: 5;A H, ; ; , 2 < 6 , F; , + 6 C6 >DAB0 X, BW; ?; > ;S6
;A < F, @: ;A H, ; ; , 2 < 6 , F; , M <HB ;0 X <U P = < F, @:
6 (6 6S6
O;A < F, >@: ;A H, ; ; , 2 < : , F; , 6 6 $?A X <U 0; < F, @:
6 (6 6S6
P;A < F, @: ;A H, ; ; , 2 < : , F; , 1 8 6 6 AB 2B@ X <U 22; 2
< F, @: 6 (6 6S6

T ; / < G 4

= < F, @: , F; , 6 E< B; ; HB D X, EB= >D>0; S6
TO;A < F, @: , F; , 6 2BBEB0 X, EB= >D>0; S6
$<;A F B0B ; , ; $>00, ?<6 ;AB 5 ?, F, D ; AB@ A, = HBB ?< Y
, =B= B0FB?; EB2@ H@ , F; , 0 6 = D , = 6 %6 ? 0B6

4

AB +< ; >D>B0B ; 22B @ < ?B ?< 0 0; B= < <> BD B ; 0 < , H<>;
: B B, ?A: < UA ?A H, ; ; B B0 UB B < B= < ; B ; < ; B < B2= 0B E ?B: < D, 0< 0B E ?B = B B ; 2@6
;AB $>00, ?< ?, F, D ;AB B ;<< F, ; ;AB <22<U D > ;0: UA ?A UB B F B0B ; , ; ;AB H, ; ;2B

, F; , $?A ?< , =B= ; A 0 ?< F, @ < C> B ; < C>2@ : E ?B , F; , 2BW6 * ? 0< : B F2<@B= U ; A ; AB +< ; >D>B0B , @6

0;' BD B ;:' ;U<' H,;;B BO' > =B ' 1 ,N<' 2B6E6 * ? 0< :' H<;2 ' < ' F<> =B 0:' E R6 ;A<0B' < ' ,F;, ' +B= <' =B' <R B BO' , =' ,F;, ' C<,<' =,' > A,' + B;<6

=' BD B ;:' ;U<' H,;;B BO' > =B ' 1 ,N<' . 6 E<' B ;0?2 2=;:' E R6 ;A<0B' < ' ,F;, ' C<,<' +< <' =,' 2E,', =' ,F;, ' C,? ;<' +6 1 6 " B B:' H<;A' < ' F<>>=B 0:

O;A' BD B ;:' < B' H,;;B @' ?< , =B=' H@' I ,F;, ' ;< <' =B' <>0 ;' +,00BO' I (F<>>=B 0J6

AB B' UB B' ,20<' ,;' ;AB' < ;:' H>;' <;' B D,DB=' ,;' $>00,?<:' ;U<' < B' H,;;B BO:' UA ?A' UB B' U ;2 ' %B?< 8O' = E 0 < ' HBA =' ;2 B' 2E,:' < ' ;AB' +< ;B' 1 > ?B22,' F<0 ; < V E R6 < B' < ' * F<> =B 0:' ?,F;, 2BO0' ; 22' ?;6 :' UAB ' ;' ?, B' > =B ' ;AB' ?< , =' < ' ,F;, ' . 2A?2 ' $,> :' , =' < B' < ' F<> =B 06 AB' < B ' N< B=' * ? 0< 8O' = E 0 < ' < ' BF;6 ' 7 ;AB' 2,;;B ' N< B=' B ;0?A 2=;8O' = E 0 < 6

U<' < B' B2=' H,;;B BO' N< B=' ;AB' , @' ,;' ;AB' % BO' , ;B ' ;O' B; B,;6 ;A,;' < ' ,F;, ' " , ? 0?<' @F , <' + ;<' IP F<> =B 0J' U,O' ,22<;;B=' ;<' * ? 0< 8O' = E 0 < ' 7 ;AB' <;AB ' I <' ?,F;, :' 5 F<> =B 0J' N< B=' B ;0?A 2=;8O' ?< , =6

2 B' BO;' < ' ;AB' ; 22B @' ,;' % 0H< ' U,O' >; 2 RB=' N O' D, 0< , ; 22B @' < ' ;AB' % BO:' B?B E D' ;<' ;O' , O' , ' B 0B' F <F< ; < ' < ' A,2 ; , B=' E<2> ;BB 0' < ' ;AB' 1 2 ; ,', =' =B , ,:' 0<' ;A,;' ;AB' UA<2B' ?, ' A, =2@' HB' ?< 0 =B B=' ,O' < D' F, ;' < ' ;AB' BD>2, ', @6 ' A,EB' B? < B=' ;' ;<' ;AB' 2 ; ,' < ?B' ' ;AB' F B?B= D' ; ,H2B6 AB' = 0; ?;0' 0B EB=' H@' ;A O' , ; 22B @:' ;AB' ?< , =B 0' < ' ;AB' = 0; ?;0:', =' ;AB' > HB ' < ' B B?; EB' B ' ' B,?A' UB B' < ') <E:' :'

1 2 ; ,
BD>2, 06' E<2> ;BB 06' <;,26
2A, = ,' "< ;0 V 1 ,N< ' C<,<' 6' + ;< OO
$>?B22,0' "< ;0 V <2< B2' < ,<' =B' ,=, O4 : P
1 < ;B' @5 ' "< ;0 V 1 ,N< ' C6' C6' =,' >R O
< B0' . B= ,O' "< ;0 V ,F;, ' "6' C6' . :' $, B <0 P O 5
1 , ,' "< ;0 V 1 ,N< ' ,B;, <' +6' / ,E B ' 6

; : 5 : : 5
== D' ;AB0B' ;<' ;AB' 4 ' B ' < ' ;2 B' B' B2=' H,;;B BO' UB' DB;' :P5 ' ' ,22:' < ' UA< ' :4 ' UB B' BD>2, 06

AB' < ?B ' ' ?< , =' < ' ;AB' UA<2B' +< ;>D>B0B' , ; 22B @' U,O' 1 , B?A,2' =B' , F<' C6' 6' =,' <R,6' <2< B2' < ,<' =B' ,=,' ?< , =B=' ;AB' 0;' BD B ;6

AB' O;A' BD B ;' < ' ;AB' +< ;>D>B0B' , ; 22B @:' ;A,;' < ' ;AB' F< ;<' = 0; ?;:' > 0AB=' < 2@' < B' H,;;B @' I;A,;' < ' ,F;, ' +,00BOJ' ;<' ;AB' , @' < ' & B22 D;< :' ;AB' BO;' < ' ;' HB D' B ;AB ' 0B E D' U ;A' 2EB ,8O' , @' ' ;AB' < ;A:' < ' U ;A' , ;:' < ' =< D' D, 0< ' =>;@' ,;' F< ;<6' A O' BD B ;' A,=' ,20<' ?< ; H>;B=' ;<' ;AB' 2<0;' D, 0< ' < ' 2 B =,6

AB' =' BD B ;' 0>FF2 B=' <' B ' ;<' ;AB' B2=' , @' < ' ;AB' D, 0< ' < ' ;AB' < B0' . B= ,O' % BO:' HB D' ,H0< HB=' ' D, 0< D' H , ;BO:' #2E,0:' I , F<' 1 ,@< :' , =' ;AB' <;AB ' F2,?BO' < ' ;AB' < ; B ' 0<>;A' < ';AB' ,D>06

2 ;B0:' * > B' < :' 6EBBC <;6
A , ;?0:' %,> B:' * >?AB00' < 6' 2 B '
2B;;B 0:' OO46
H ;<0:' < ; B00'< :' QJ7' 1 ,00;> ,8O'
2B0 F O' ,NN , 0;:' OO 7' E BUO' < '
) ,F<2B< ' < :' O 46
N, :' ?,F;, ' 28Ba2 <:' ,=TZ' < B' < '
;AB' F, 0A' BD8? ?@:' 6
F B=,' EB :' ,> > =8O'<FB ,; < O'
< ';AB:' 6(6
2A,' =B' < B0:' ;;2B' < :' QJQJ 6
6\2H>M>B M>B:' * > B' < :' ?< , =O'
@' < '#0; B ,=> ,:' O:' J4 7' A O'
, ?A' < ' ,= R:' 6(I '7 D<EB < '
< 'I = R:' O '7 D<BO', O', 29 00,=<'
;<' %< =< ' , =' = B0:' :
2?,2,' 2,' 2B,2:' ?< H,;' < :' 6
2?, R:'<FB ; < 0, < =:'6 :'6 6
2?<B ; B:' 0 0A' ,;:' O 6 6
2B M>B :' ?< H,;' < :' O 6
2A, = ,:' ;AB' F<0 ; < ' ,;:' O '7 22'
,;:' O 46
2 , R:' <FB ,; < O', <> =:' 46
2 ,R, :' ?< H,;' < :' O5 6
2 B =,:' < ; B ' < ; B00' < ' 8< ;>'
D6,2:' 7' 0 BDB' < :' (4:' 4 7'
H2<? ,=B=' H@' 2EB ,:' OO46
2 B , ,:' C<0B' B E,0:' 1 , M> O'< :'
F, 0A' B E<@',;' +, 0:' 56
2< ,:' DB B ,2:' 16, M> O'< :' +< ;>Y
D>B0B' ,=E 0B '< ' 1 ,00;A ,:' P '7 ,;'
2 B =,:' 4O P:' O 6' K
2F>N, ,0:' 0> B?; < O' ';AB6'
:' O 46
2E,:' EB :' . B22 D;< 8O' F<0 ; < '
< ';AB:' 5 :' OP6
2E, BR:' 1 , , <' =B' ,0; <:' D<EB Y
< '< '(B < ,:' 4: P:' O4 P47'
B0 D O' ?< , =:' 57' A O' F Y
0< B ;' , =' =B,;A:' P P6
B ?,:' BE<2;' < ';AB' F, 0A'
<2< B6O' :' P 7' ;AB ' =BF>; BO'
,;' ,= R:' O:' P O6
=,2>0 ,:' ?< M>B0;' < :' H@' ;AB'
+ B ?A:' O' 7 0F D' , =' 0> B '
?, F, D ' :' 6 O 7' <>2;8O'
DO<EB B ;' < :' 6
D2<>,:' + ?B' < :' ?< , =O' '
(,2 ? , ' ?,E,2 @:' 4 :' 4 6 '
0< :' (B< DB:' ?,E,2 N ' DB B ,2:' < '
B; B,;' ;<' < BO' . B= ,0:' O '7
F> 0>B:O' ;AB' " B ?A' ;<' , ;, B :'
OP56
,?B ,:' ?< 2J,;' < :' 6 6
,D< :' >?AB;8O' ?< M>B6O;' < :' '
O: 'G 2,;B ' 0> B?; < ' :' 6
, N>BR:' B R,D,8O' <FB ,; < O'
<> =: 4 56
?B:' ;< <:' DB B ,2:' ?< , =O'
' 6O;> 6,O:' 4' 7 =BF<0B=:' 6
B R,D,:' , 2<0:' DB B ,2:' ?< Y
, =O' , @' '%,' 1 , ?A,:' 4 6 O'
A O' ,=E, ?B' < ' , N>BR:' 4'
=B B,;B=' H@' <>2;',;' ?, ,:' 5 P'
=B B,;B=' ,;' B ,' 1 < B ,:' '
0>FB 0B=B=' H@' $2, B:' 6
D>B22BO:' D<0; :'% HB ,22B,=B ' '
;AB' < ;BO:' 6
0;< D,:' < ; B00:' PO:' 7' 0 BDB'
< :' P6
6O;> ,O:' $< B;' :' 4 '7 B6E'
F2< ;O' < '+< 2 B ' :' O 6
>DB B,>:' + B B' " , ?< O' A, 2BO:'
1 , 0A,2:' =>B' =B' ,0; D2 < B:0>FB Y
0B=BO' ;6 @ :' 7' ,;' 0 BDB' < '
(B < ,:' 7' A O' F <?2, ,; < 0:' PO' 7'
A O' A, 0A' ; B, ; B ;' < ' D, 0< ' < '
(B < ,:' P 7' , ?ABO' < '$, ?B2< ,:'
:' :' 5 7' ? B,;B=' 2 ;, @'
D<EB < '< ' ,;,2< ,:' 5 7' ?AB? Y
B=' HB < B' , ,D< ,:' 5 '7 0>FB Y
0B=B=' H@' 1 ,?=< ,2=:' 556
>DB B,>:' CB, :' DB B ,2:' H <;AB '
< ',H<EB:' > 0 2 >2' <FB ,; < O' < :'
5 :' 546
E 2,:' W%; ('A DA A, =B=' =< DO' ,;:'
:' 6

$,??B2, :' 1 , >B2:' DB B ,2:' ?< Y
, =O' < ;AB ' F <E ?BO' < '
+< ;>D,2:' 4P:' OP:' 6 556
$,=,N<R:' < ; B00:' P '7 ;A B,;B B=' '
H@' 1 < ; B :' :' 6
$,D> ' I ,;,2< ,J:' ?,F;> B=' H@'
$; 0A' 2, = D < ?B:' O5 6
$,22,0;B <0:' " , ? 0?<:' 0B EBO' > =B '
*B2' +, M>B:' :' 5 5' 7' 0> F 0BO'
1 < ; B 8O' ?,E,2 @:' '7 =B B,;B=

, ;' 3 ,2, B ,' , =' ,HB22 ,:' 7'
C, ;B ' <FB , ; < 0' < :' O:' 6'
$, ,D> , @' =8 22 B 0:' ?A 22B:' DB BY
,2:' ?< , =0' + B ?A' < ?B0' '
) < ;A' , ; , 2< , :' 05 :' 0546
$, H, ' =B2' + B ?H:' 0 0A' < :' 6 6'
$, ?B2< , :' ;AB' " B ?2 ' :' O:' ('7
?< 0F , ?@' :' 6 0'7 1 , ?=< , 2=80'
?, B' ?< ?B : :05 :050: 6'
$, ?B , :' ?<2< B2:' 0> F 0B60' %B< :'
4 7'?< , =0 ;2 B' 0;> , 0:O 6'
$, M> 22 , :' ?< H , ;' < :' P :'
$, B <0:' , N< :' +< ; ; D>B0B' < ?B :'
HB; , @0' 2 B = , :' 4P6
$, W;B :' 0B DB , ;' A 0' BWF2< ;' O 56'
$, R, :' <>;' < :' 4:' 6
$B? U ;A:' ?<2< B2:' , ;' $, H, ' =B2'
+>B ?<:' ' 7' , ;' ;AB' <, :' 6'
$B B0 < =:' & 22 , ' , :' , 0A , 2:'
< D, RB0' +< ;>D>B0B' , @:' 4 '
4' 7' & B22 D;< 80' ?< =B ?B' '
A :' 6 6
$2, B:' C<, ?A :' DB B , 2:' ' , ; , Y
2< , :' 5' 7' A 0' , ; ;B F;0' ;<' 0 ??<> '
(B < , :' O O:' :' ' 7' A 0' 0Y
; , B0:' P ' 7' 0>FB 0B=B0' B R, D, :'
P ' 7' B0 D 0' , ; , 2< , ' ?< , =:'
57' ?< , =0' ' , = R:' ' 7'
<>;B=' , ;' $, R, :' 6 4 ' 7' , =B' ,'
BDB ;:' P 6'
$2, @ B@:' %< =:' A 0' = 0, 0;B ' , ;' >B '
D <2, :' P P6
$<2 E , :' DB B , 2' C>2 , <:' 0> B Y
=B 0' (B < , :' 56
$< B;:' DB B , 2:' 2 0' ?, F, D ' '
;AB' 0;> , 0:' 4 :' 4 ' 7' 2, ;B '
<FB , ; < 0' < :' ' ;AB' 0;> , 0:
O ' P6
$>060, ?<:' & B22 D;< ' , ;:' ' 7' =BY
0? F; < ' < :' 6 5 : P 57' H, ; ;2B'
< :' P 56

, H B , :' 02B' < :' 0> B D0' < ' + B ?A'
F 0< B 0' , ;:' 6'
, = R:' AB2=' H@' F, , =0:' ' 7' F<Y
0 ; < ' , =' =B B ?B0' < :' O 57'
, ; ; , ? B=' H@' . ?; < :' 7' , 00B Y
H2@' < ' ;AB' < ;B0' , ;' P 6'
, , B22 :' DB B , 2:' ?< , =0' ;AB'
!' B, D>, =' < ' ;AB' , @' < ' F, :8
O O '46
, FHB22:' DB B , 2:' D<EB < ' < '
(H , 2; , :' 0B =0' ; <<F0' ;<' ">B> '
D <2, :' 6
, FHB22:' 2BW, =B :' ?< , =0'
P;A' * E 0 < :' O :' OO :' O 6'
, F<EB =B:' 1 , M> 0' < :' ?< Y
, =0' , ' = E 0 < ' ' , ; , 2< , :' 5 7

, ;' ;AB' , , ' < ' , $ 6 :' 054 '7
, E, DB0' ;AB' H< =B 0' < ' " , ?B:' 0557'
=B B, ; 0' 1 , ?=< , 2=' , ;' , =< , :' P 6
, H< :' ?<2< B2:' =B B =0' 1 BM> '
B R, :' 56
, =< , :' 1 , ?=< , 2=' BF>20B=' , ;'6
¤
, <:' C<0B:' DB B , 2:' A 0' , B0;<'
6, D, 0;' ;AB' 62> ; , :' 4' 7' D<EB < ' < '
. , 2B ? , :' <FF<0B0' >?AB;:' O' 7'
2 B0' HB < B' " B ?A' , =E, ?B' , =' 0'
=BF<60B=:' 0506
, <:' C>, :' DB B , 2:' ?, F; > B0' . 22, '
, ?, :' 5 ' 7' , =0' ' =BF<0 D' A 0'
H <; AB ' C<0B:' 0506
6, 60; , 2=0:' / , E B :' DB B , 2:' 0, EB0' ; AB'
2 EB0' < ' ;AB' B ; , 2' C> ; , :' O ' 7'
, =B' , ' B HB ' < ' ;AB' 0;' BY
DB ?@:' O 7' =BF<0B=' H@' ;AB' < ;B06'
6
, ; , 2< , :' ?, F, D 0' :' O :'
4 :' 05 P O6
B EB , :' 1 , ?=< , 2=80' ?, ;< B ;0'
, ;:' 05 46
0D, :' (, H B2:' , = , 2:' , =B'
BDB ;:' P 6
>=, =' <= D<:' < ; B00:' O:' :'
5' 7' 0 BDB' < :' O 6
2, >0B2:' $B ; , =:' DB B , 2:' A 0' BY
F< ;' < ' ;AB' " B ?A' , @' , ;' < B0'
. B= , 0:' OP ' 7' , ;' , ; , B :' 0456
<, :' EB :' ?< H , ;' < ' ; AB:' P4 PP6
< H , :' BE, ?>, ; < ' < :' O 7'
0, ? ' < :' O O7' B?<EB B=' H@'
, ;:' O :' 0456
<2B:' %<U @:' DB B , 2:' , ;' $>00, ?<:'
6 45' 7' , ;' < B0' . B= , 0:' O '
' 7' F> 0>B0' " B ?A' ;<' , ; , B :'
O4 6
< ?BF? < :' "< ;:' H2<U ' >F' H@
;AB' $; 0A:' 46
< =B:' (, ? , :' 2B, =0' ?< E<@' ;<'
(B < , :' O O7' D<EB < ' < '
%B =, :' 6 7' 0> B =B 0' , ='
=<B0' A< , DB' ;<' C<0BFA:' 6
<F< 0:' " , ? 0?<:' DB B , 2:' A 0'
D>B 22, ' U, , B' ' & B0; B '
=, 2>0 , :' O6
< ;B0:' F <F<0, 2' < '0> < D' ; AB:'
O P' 7' BB; D' < ' ; AB:' O :' 6
<; ; <:' ; , F2B; <:' DB B , 2:' ?< Y
, =0' $; 0A' ?, E, 2 @' < ' B; B, ;'
; <' < B0' . B= , 0:' OP 6
<>F D @:' 1 , M> 0:' ?< , =0' '
, ; , 2< , :' O 6
<W:' & 22 , :' DB B , 2:' ?< , =0'
, ;' 2 B =, :' :' P4:' 4 P6
, > > =:' <HB ; :' DB B , 2:' ?<

< B20 ;AB % A; * E 0 < : ' 7 ?< =B ?B < ' \ \ ?22 >D;<>' ' A : : ' 7 B, 2@ ?, BB ' < : ' 7 A 0 B;A<=0: 47 0 0A' U ;A' ;B6 < W: 7 , ;' ?< H, ;' < ' $, M> 22, : 7 , ;' ?< H, ;' < ' ;AB <, : P4 I ' 7 , ;' $>00, ?<: : 45'8 B; B, ;0 ;' < < B0 . B= , 0: 54: O 7 B; B, ;0 < ' <H , 2: O O: 0057 F> 0>B0 ;AB " B ?A: O 4 57 A 0 BWFBB2 ; < ' ;' < ;AB " B ?A' 2 B0: 04 ' 7 , ;' , ; , B : 04 6

*8 2< , : (%% 2< , 6 N
* , <0; , : $B , =<: +< ;>D>B0B' < ?B : >; B0 , ;' 2 B =, : 4 ' 7 BWB?>;B=: 446
' , <?, ' 0B RB=' H@' " B ?A: 6
* B2' +, M>B: ;AB' * > B: ?< , =0 ;AB' N' @' < ' ;AB' %B ;:8 4 7 U 0 H, ;;2B' < ' , , B0: 44 57 <??>F B0 , 2, , ?, : ' 7 B?<EB 0 , 2, , ?, : 54 7 =B B, ;B=' , ;' 2H, ' =B' < B0: 2 ' 7 0>FB 0B=B=' H@' %, ' > , , : O 6
*8#0F, >, : , 2<0: DB B , 2: , =0 ;AB' +< ;>D>B0B: 005 7 =B0; <@0 H =DB' < ' . 22, ' . ?2A, : O ' 7 , ;' H , ;B0: O 46
*<@2B: A, 2B0: ?<2< B2: $; 0A' < 00 < B ' ' , ; , 2< , : , ?Y ; E ;@' < : 054 5:
* <>B;: CB, ' $, F; 0;B: < ;B' =8 # 2< : ?< , =0 ;AB' 5;A' < F0: 004 7 , ;' . , 22, =<2 =: O 7 < =B B=' ;<' , =E, ?B' ;<' 2 B =, : O 6
*>AB0 B: +A 2 FFB: DB B , 2: ' $, ?B2< , : 7 =BF<0B=' < ' D<EB < 0A F: 5 6
*8 ' H, : ' $B N, : A 0 B <Y , => ' < ' ;AB' +< ;>D>B0B' , @: 4 : 4 'S '% ' 7 <;B0 < ' $>00, ?<: 47 , ;' < B0 . B= , 0: 00 7 ; , ?; ?, 2 <H0B E, ; < 0 < : 04 :

H2B: CB, ' $, F; 0;B: DB B , 2: ?< Y , =0 , ; 22B @ , ;' , ; , B : 005 6
#?ABE, , : DB B , 2: =B B, ;B=' H@' ;AB' " B ?A: 6
#?ABEB , : D>B 22B < ?A B : 0A<;' H@' 1 , : O 6
#D> , : " , ? 0?<' 22, < : DB B , 2: , ?AB0 < ' %, ' 1 , ?A, : I 57 =BY F<0B=' < ' ?< , =: 4 6
FB? , =<: ;AB' IC>, 1 , ;

* , RJ: 0B RB0 (>, =, 2, N, , : 7 A, , 00B0 9 D' C<0BFA: 57 A 0 ?> 0 < 0 <> =' 1 , = =: 6
# <2B0: $, < ' =B: ?< > , >=0 ' , ; , 2< , : 054: 6
#0; , =, : C>2 , <: ?<2< B2: =B B =0 2<0; , 2 ?A: 5 : 5 : 5 6
#0; , =, ') <E, : ;AB: 6

", B: < 6 B @: DB B , 2: ?< Y , =0 +< ;>D>B0B' ?, E, 2 @: O 7 , ;' % B0 < ' < B0 . B= , 0: O 7 <FB , Y ; < 0 < : < ' 0<>;A' H, ' < ' ;AB' , D>0: O : O 4: 04 :
", B: ?, F; , : 6) 6: 2B, =0 , =' < ' ?<, 0;' < ' , ; , 2< , : 054 56
"B B@: DB B , 2: , ;' $, H, '=B2' +>B ?<: ' 7 , ;' $>00, ?<: 457 HB < B' ;AB' % B0 < ' < B0 .8Ba2 , 0: 005:O 6
"2, = : , N< : 2B ;' ' ?A, DB' < ' < H , : O 46
"2B;?AB : ?A, =: ?<2< B2: ?< Y 0; >?;0 % B0 < ' < B0 . B= , 0: 5 : O 6
"< N, R: 1 D>B2: DB B , 2: +< ;>D>B0B' 0;B ' < ' U, : O 6
"<> , 0: $, 0: H D, = B DB B , 2: A 0 =B B ?B' < ' 1 < N> ?A: 5: O 7 0> B =B 0 , ;' (B < , : 56
"<@: 1 , W 2 B : DB B , 2: , ;' $>0Y 0, ?<: 5: 40: 44: ' ' BF< ;0 < ' ;AB' % B0 < ' < B0 . B= , 0: 00 ' 7 A 0 00 < ' ;<' + , 0: O 6
" B B: 1 , >B2: DB B , 2: ?< , =0 ?, E, 2 @' , ;' , N>BR: 4 7 <>;B=' H@' BH, 0; , : 5 7 =B B, ;B=' , ;' 2?, 2, ' 2, ' B, 2: ' 7 ?< , =0 1 > ? , ' , @: 6
" < : " , < 0: ?A B ' < ' ;AB' 0; , ' ;<' 1 , 00B , : 5' 7 A 0 , =E ?B' , ;' $>00, ?<: ' 7 B , 0 < ' < ? , 2 , ??<> ;0 < ' $>00, ?<: 00 6
">B D <2, : = 0, 0;B ' , ; : 6
">B 0, >; , : ?< H, ; , ; : 6

(, 2 ? , : @' < : '> =B ' * B2' +, M>B: 4 7 1 , A@ 2B ;' ' ?< , =' < : 4 ' 7 <FB , ; < 0 < ' ;AB' H< =B 0 < : : 4 : O 6
(, , @: 1 , ; ' =B6 B? B; , @' < ' ; , ; B: A 0 2B; ; B 0 ;<' . B22B02B@: P46
(, =, >>B: 2, >=B: DB B , 2: 2B ;' HBA =' ;<' D>, =' 1 , 00B , 80 H, 0B: 007 < =B B=' ;<' N< ' 1 , 00B , : O ' 7 A 0 , 2> B: O 6
(, @, : F, ; 0, ' ?A B : <FF<0B0 , ?AB; ' ' , D< : 6
(, R, : < < B: DB B , 2: , ;' ;AB

B , 2< B , 6 <FB , ; < 0 < = ?>2; BO: O: A 0 ? F, D =>2, 0 , 0B RB BE 22B: O B ; B 0 (, , =, A 0 M>, B20 U ;A <>2;: 4) , F<2B< 8 = 0 BD, = < O : A B, ;B 0 ;< , H= ?, ; B: 56

I - * 2 .0 -5- * => I &(

(, =: CB, $, F; 0; B: DB B , 2: , ; ? , , :5 O <FF<0BO ;AB B , <60: =B B, ;0 %, 22< , , ; . 22, (, ? , , 6

(< " , ? 0?<: DB B , 2: , ; ? , , : 5O ; ;AB B , 2< B , 6

(, A, : A< , 0: DB B , 2: ?< Y , =0 $; 0A ; <<F0 , ; , = R: 6

(, , =, :0>H ;0 ;< BH, 0; , : 6

(, <22B 0: ?< H, ; < : Q / J6

(>B 22B <0: ; AB: 4: O 5 6

(>B; @: ?<2< B2: =B B, ; B= A@ , ; , 2, 0: 5 6

>HB ; : + B B: DB B , 2: <FB , ; < 0 < : , D< , = , ; , 2< , : O : : 6

, 22 UB22: $ 6: ?, F; , : 226) 6: H> 0 " B ?A 0A F0 , ; <0, 0: 6

B , 0; : = B0: DB B , 2: =B B =0 >=, = <= D<: : O 5 0> Y B =B 0: 6

B>=B2B; : DB B , 2: ?< , =0 = < F0: 54: 5: O , ; $>00, ?<: 5 4 6

22: <U2, =: DB B , 2: =B; , ?AB= ; < + < 2, 2BD B: P . B22 D; < 80 ?< =B ?B : , D>0: O <FF<0BO B@ B : P5: 45: , ?ABO ; < N< & B22 D; < : O O , ; $>600, ?<: ; ;AB % BO< < BO . B= , 0: 547 B <EB= ; < 0<>; A H, < , D>0: O 4 : O4 : O4P 6

<0; , 2 ?A: ?< H, ; < : 4 0 BDB < : 0> B =B < : 54 6

H, <2, : DB B , 2: , ; ?< H, ; < 1 , D, 2B : O6

, ; , =<: * > B < : A 0 F2<; , D, 0; ;AB C> ; , : O6

, R<: 1 D>B2: DB B , 2: 0>??BB=0 8 * < B22 ?< , = , ; , Y 2< , 6

C, ?, : <FB , ; < 0 <> =: 6

C<, <: + ?B BDB ; < + < ; >D, 2: 5 O7 & B22 D; < 80 , FFB, 20 ; <: O 4 6

C< BO: C<A : , N< 6 # 6: , 00 0; 0 ?< 0; >?; < < % BO < < BO . B= , 0: O 7 A 0 =BO? F; < < ; AB : O : O 6

C<0BFA $< , F, ; B: 9 D < F, : A 0 F2, < ? F, D : 4 A 0 = ?>2; BO: O: A 0 ? F, D =>2, 0 , : 7 0B RB BE 22B: O B ; B 0 (, , =, : 7 A 0 M>, B20 U ;A <>2;: 4 7) , F<2B< 8 = 0 BD, = < : O : 7 A 0 ?< F26, ; 0: 4 7 ; A B, ; B 0 ; < , H= ?, ; B: 56

C<> =, : CB, $, F; 0; B: , 0A, 2: B0 D 0 ?< , = F, : 4O: 6

C> <; : =<?AB: DB B , 2: * > B < H , ; BO: % B< : 7 EB0; 0 , = ; , BO 0; < D, : 7 , ; 2 B =, : 47 U ; A 1, 600B , + < ; >D, 2: OO 7 , ; $>00, ?<: 47 , ; 0, ? < < H , : O 0 7 HB < B % BO H < BO 8 B= , 0: O 4 : OO 7 B; B, ; 0: O 6

C> ; , : ; AB B ; , 2: ; 0 =B, 2 DO U ; A . ?22 D; < : : 4 7 ; 0 F2, < ?, F, D 5: 5 4 7 ; 0 UB, B00: 7 ; 0 =B? BB0: 7 2 BO < BE 22B , = = 0FB 0BO: 4 7 , H= ?, ; BO: O :

9?22B , : " , ?< 0 A 0; <FAB6 DB B , 2: ?< , = % B< : 4 7 <??>F BO , 2, , ?, : 7 =B B, ; 0 * B2 + , M>B , ; 2H, =B < BO: 55: 7 A 0 M>, B20 U ; A 9 D C<0BFA: O : 6 6

%, ?@: %> R: DB B , 2: , ; ? , , : 5 O7 =B B, ; < : B , 1 < B , : 7 A 0 BWFB= ; < ; < 2DB? , 0: 7 A 0 , = < 1 <D>B : 5 6

%, , B , : 2, ; : DB B , 2: , ; 8, , BO: 44 7 B, >=, = <= D<: 7 , ; ?< H, ; < 2H, =B < BO: 7 , ; < BO . B= , 0: O 6

%, > R, H, 2: 1 , >B2: , =B , B Y HB < ; ; AB F, 0A BDB ?@: O 7 A 0 E BU0 < ; AB < ; BO: P 4 7 =BF<60B=: 6

%, < , : +B= < , <: 1 , M> 0 < : A 0 , B0; < 6, D, 0; ; AB C> ; , : 4: O: P 7 N< 0 BE 22B C> ; , : O 7 ?< , =B < @ < ; AB %B ; : O 7 <FF<0BO 1 < ; B : O 7 , =0 ; AB BDB ?@ < , = R: O 7 =B B, ; B=, ; . 22, (, ? , : 7 , ; " >B ; B , ; <0: 7 N< 0 . B22 D; < , ; % BO < < BO . B= , 0: O 6

%B??A : DB B , 2: , ; , 2< , : 7 , ; 0 BDB < (B < , : 5: 4: O56

%B ; B: + , ? 0?<: +< ; >D>B0B DB BY , 2: ?< , =0 , ; #2E, 0: 4 : 6

%B ;A: C, B0: DB B ,2: B< , >9 ;AB; <<FO ,: ;AB 3BRB B: /N- N< \B2 [;<22 < ; ;AB 2E ,: COO 9 ,; $>00,?<: C&J : : 4O 2 O N9 ,; 22 ;AB A>;; ?: J ,; ;2 B % BO < < BO \ ?I2 ,0: O : OO : O, GS F> 0>BO ;AB " B ?A:O4 :O4aL O4 6
%B< :0> F 0B=H@B<2<>B2 $, ?B ,6 4 6
%? =,:0 BDB < : 6
% 2, ?60: <= D< =, <>0,: < =B =B: + B 1 0;B < BDB ;' < +< ;>D,2: 2C : O 4 6
% 0H< : <;O : O , B0;O ,;: O 46
% EB F<<2: <HB ;' #, 2Z < : A O ?< B 0F< =B BB U ;A 22 B22 D;< : 5: O 6
%<H<: C<,<: DB B ,2: B< , =O ,; H , ;B60: 5: O 6
%< 0< : DB B ,2: ;A B,;B O 0;< D,: ' N : ' ,; ;AB ?< H,; < ' ;AB <,: ' ,; $>060,?<: 45 ' ,; ;AB % 2 BO < ' < BO B= ,0: OO5 B; B,;0: O O6
%< D,: 2B,=B ' < 'F B 22B <0: O5 6
%>N, : 1, >B2: % HB ,2 2B,=B ' ;AB < ;B0: 6

1,?=< ,2=: #; B B: , 0A,2: * > B < ' , B>;> : D<EB < ' < ' ,;,Y 2< ,: 55: 67 A O B2 B ' < ' $, ?B2< ,: ' N< O >?AB;: O : O5 ?AB? B= ,; , =< ,: ?< =>?;0 ?< E<@O ;< $, ?B2< ,: O5 O: B;> O ;<N< ' >?AB;: 6
1,A@:) ?<2,0: DB B ,2: ?<, , =O ' (,2 ,: 4 : , 20 ;< B2 BEB 0;< D,: ('A O UB, B00: O 6
1,2,D,: 0>H ;O ;< BH,0; , : 6
1, B0,: =B B,; < ' ?AU, ;R ,;: 5 6
1, ?A, =: DB B ,2: =B B,;B= H@ * B2 +, M>B ,; , , ?0: 44: 45 B; B0 < ' ,2, , ?,: 54 ,; $>00,?<: 6
1, D,2B : ?< H,; < : O6
1, 0A,22: H 2FA: 2 O = 0,0; <>O ,;;B F;' ;< B2 BEB (B < ,: 02, : O4 6
1, ; : (6: , H ,2: =B0; <@O " B ?A ?< E<@: 6
1,0?, B 2,0: C< <: +< ;>D>B0B ; , ;< : 2 O ?,F;> B , =B6EB?>; < : 44: OO 6
1,00B ,: = B : , 0A,2: + ?B < #002 D: ?< , =O , @ < ' +< Y ;>D,2: 557 A O F2, ' < ' ,;;,? D +< ;>D,2: I 7?A, ,?;B ' < : 4 , ;' >=,=' <= D<: O : ' A O B =,? <>O BN < ;' < ' ?< 2 ,;' < ' ;AB <, : O ' HB0 BDBO , =' ;, BO 2 B =, : 4 4 , =E, ?BO ;< +< ;>D,2:6 O ,;' $>00,?<: , ?ABO < ' % 0H< : 5 O ,;' 0,? ' < ' < H ,: O O 8 BUO % BO < ' < B6-: B= ,60: OO O A O = = ?>2; B0: OO5 O = 0F,;?ABO "<@ ;< +, 0: O) ,F<2B< 8O B , O < : O B; B,;0: O 4 ' A,2;O ,;' , ;, B : O44 56 ,;,D< =,: < ;' ,;' ,= R: 5 6
1?%B<=: ,N< : D,22, ;' ?< =>?;' < : ,;' ;AB <,: 6
1?M> B R,: 0 BDB < : 5 6
1B <: (B < <: K #2 > ,:8 2B,=B ' < ' D>B 22B <O ' 2= ,0; 2B: O5 ' DA;O ;AB " B ?A ,;' 2 ,R,>: O5 6
1B 2B: DB B ,2: A O ,;;,? ' ,; $>00,?<: 4 : 6
1 2, 0: " , ?0?<: 2B,=B ' < ' M>B 2B;B0: 5 : 5 6
1 2A,>=: DB B ,2: ?A, DB < : ,; ?, ,: 5 ' <>;O $2, B8O < ?BO ,; $,R,: 4 6
1 ,: " , ?0?< #0F<R @: ;AB B2=B : A O 0; >DD2BU ;A >?AB;' ' ,D< : ' A O BWF2< ;O ') ,E, B , =' ,D< : O 56
1 ,: / ,E B : ;AB @<> DB : K ;2 B ;>=B ;: 2 O BWF2< ;O , =' ?,F;> B: : : 6
1 <;' =B 1 B2 ;<: = B: ?<> ; B ' < ' 9 D C<0BFA: : 6
1 < N> ?A: ? ;, =B2 < ' (B < ,: ,00,>2;' < : : 6
1 < N> ?A: ? ;, =B2 < ' $, ?B2< ,: F2<;O ;< ?,F;> B: O6
1 < ;H > : %<> 0 + B B: DB B ,2: = 0?<EB O % BO < ' E B= ,0: O 4 5: OO5 P ' ,;' , ;, B : O456
1 <>; , B: DB B ,2: =B B,;O ;AB 8,2B ?, O B, ' 1 < B ', : O5 6
1 << B: ' C<A : A O E BUO < ' ;AB =B B ?B < ' +< ;>D,2: 56
1 < ; B : #=<>, =: , 0A,2:U<> =B=' ,;' ?, ,: 5 ' < ?BO F,00BO < ' * B0FB>,' +B <0: : ' , ?ABO < ' $, =, N<R: : ' B; BO ;< BE 22B: O7 =B B,;O %,' < , ,' ,;' ">B ;B' , ;<0: 6
1> ? ,: ?,F;> B < : H@ BH,0; ,> : 47 A O 0B?< =' ,H< ; EB BWFB= Y ; < ' ,D, 0;: O6
1>0 B : DB B ,2: A O U< '

, D< 22 ' 7 =B B, ;0' 8 ' < B22'
, ;' ?< H, ;' < ' 1 , D, 2B :' O6

), F B :' ' & 22 , ' 2 0' B , 0'
< 2' >?AB;:' ' 7 < ' $>00, ?<:' 4'
'% ' P ' '%
), F<2B< :' # FB < :' 0>FB 0B=B0'
;6' @ ' , =' B 22B:' 4' 7 H 0' F2, 0'
< ' ;AB' ?, F, ' F, ' , ='
+< ;>D, 2:' 54 :' 4 7 2 0'
= E< ?B' , =' , , DB:' 5 57'
0>FB 0B=B0' >DB B, >:' 55' 7 A 0'
< =B 0' ;<' 1, 00B , :' 4 5:' O4' 7
B?B EB0' " <@80 BF< ;' < ' 1, 00B , :'
O P:' O ' 7 0; , ;B B ;' < ' A 0' F2, 0:'
O 5' 7 A 0' M>, B20' U ;A' 9 D'
C<0BFA:' P:' P7' 0?AB B0' < '
, BW, ; < ' < ' < ;AB ' F, :'
P P 6
), E, <:' (, ? , :' DB B , 2:' =B B, ;B='
, ;' " , 2?B;:' P VO6
) B@:' 1 ?AB2:' , 0A, 2:' *> B' < '
#2?A DB :' ?A, , ?; B ' < :' 5'
;A B, ;B 0' >=, =' <= D<:' '
HB0 BDB0' >=, =' <= D<:' O O'
, =E, ?B0' < ' 2 B =, :' 47' , ;'
?< H, ;' < ';AB <, :' 5 PP7' EB0;0'
2 B =, :' P4 4 ' 7 U ;A' 1, 00B , '
' +< ;>D, 2:' O 7' , ;' $>00, ?<:'
:' P :' P ' 7 HB < B' ;AB' % B0' < '
< B0' . B= , 0:' O 4:' 005 P ' 7 BY
; B, ;0:' OP 6

?, , :' H, ;; 2B' < :' 5 P6
8 * < B22:' A, 2B0:' ?< , =0'
> =B ' %, ' < , , :' :' O 6
8 * < B22:' B @:' < ?B ' < ' ;AB'
' 2;< , ' BD B ;:' , 20' ;<' ;, B'
?< E<@' ;<' (B < , :' P ' 7 0> F 0B0'
<>A, 80' ?, F: : P7' ' ?< , ='
< ' ;AB' @' < ' , ;, 2< , :' 5' 7
0> F 0B0' (>B ; @80' ; <<F0:' 5 7'
, ; ;, ? 0' <>A, :' 5' 7 ' , , Y
D< , :' 5 7' <>;B=' , ;' 1, D, 2B :'
O7' B< D, RB0' A 0' < ?B0:'
7' <FF<0B0' >?AB;' , ; < ;<0, :'
05 ' 7 , =' 1, ?=< , 2=:05 ' 7 A 0' 0>?Y
?B00 >2' < ;AB ' , =:' 054 5' 7
U<> =B=' , ;' %, ' $ 0F, 2:' 7' ; H>;B'
;<' A 0' , ?; E ;@:' P O6
=B , , :' ;AB' +< ;>D>B0B:' ?A, , ?Y
;B ' < :' 7' ?, 22B=' <>;:' 7'
1, 00B , 80' ; B, ; B ;' < :' , ='
& B22 D; < 80' F <; B0;:' O ' 7'
H2<? , =B' 2 B =, ' , =' >=, ='
<= D<:' O :' 547' =;' ;AB' % B0'
< ' < B0' . B= , 0:' O O' 7' ?, F;> B

1, 00B , 80' , =B =B ?, F0:' OO 7'
?, F;> B' = 0F, ; ?2 B0:' OP 6
B 0B:' +B= <' =B' ` ?EB=<:' $ 0A<F'
< :' , =B', ' B HB ' < ';AB' BDB ?@:'
O 7' B >0B0' ; <' ;, B' , ' <, ;A' < '
, 22BD , ?B' ;<' ;AB' < ;B0:' , ='
B0 D 0:' 6
2B, 0:' %<> 0 +A 2 FFB:' *> B' < :'
A 0' ; D>B0' , ;' , = R:' 6
E B=<:' ?, F;> B=' , =' B?, F;> B='
2 @ $< B;:' 4 6

+, ? :' *B 0:' DB B , 2:' , ;' $>00, ?<:'
P :' P :' 45:' ' 7 , ;' ;AB' % B0'
< ' < ?:0' . B= , 0:' OO :' O ' 7' F> Y
0>B0' B; B, ; D' " B ?A:' OP5' 7 , ;'
, ;, B :' O4 :' O4 :' O4 6
+, 2, <W:' " , ? 0?<:' A 0' ; D>B0:'
O:' O 6
+, F2< , :' DB B , 2:' +< ;>D>B0B'
, =E 0B ' < ' 1, 00B , :' P :' O 6
+, M>B:' *> B' * B2:' %%% * B2' +, M>B6
+, EB;; :' ?<2< B2:' ?, N ;> B=' H@' ;AB'
=B , -:8, :' O 6
+B2B;:' CB, ' C, ?M>B0:' ?<2< B2:'
1, 00B , 80' ?< =B ?B' :' 6
+B ?AB:' < ; B00' < :' 6
+B B , :' ?<2< B2:' A 0' , ?; E ;@' '
, D< :' 7' , ;' %B =, :' 6
+ ?; < : < , 0:' DB B , 2:' A 0' M>, B2'
U ;A' , > > =:' PP7' , ;' $>00, ?<:'
: P :' 4 :' 4P' 7 A 0' = 0F, B '
B ;' < ' %B ;A:' 57' , ;' ;AB' % B0'
< ' < B0' . B= , 0:' O :' O 5:' OOP6
+<FA, :' ' < B:' , =0' ?<, 0;0' < '
0;> , 0' , =' $ 0?, @:' O P6
+< 2 B :' C' >, >' * , R:' K' ;AB' , '
M>B0 ;<:8 A 0' , ?; E ;@:' 7' ?>;0'
$< B;80' ?< > ?, ; < 0:' 4: 5'
A 0' BWF2< ;0' ' 0;> , 0:' O 46
+< ;>D, 2:' DB<D , FA@' < :' PP'
& B2 < 80' 0?AB B' < ' ;0'
=B B ?B:' P4 5P7' ;0', @:' 4 '
BDB ?@' < :' 5 7' E, 0 < ' < :'
H@' 1, 00B , :' O O ' 7' ;B , 2'
; <>H2B0' < :' => D' ;AB' E, 0 < :'
O P 6

BDB ?@:' ;AB' +< ;>D>B0B:' 5 :'
O 46
BDB ?@:' F, 0A:' ;AB' 0;:' < Y
, ;B=' H@' B ; , 2' C> ; , :' O :' 05:'
O:' 4' 7 =BF<0B=' H@' ;AB' < ;B0:'
' 7 ;AB' 0B?< =:' , FF< ;B=' H@' ;AB'
< ;B0:' 6
B 22B:' < < B' A, 2B0:' DB B , 2:' '
, ; , 2< , :' 0>FB 0B=B=:' 4' 7 ?<

N> =0 22) , E , B: O - : ' G A 0 ?< ;B0;' U ;A 1 , : O CL6
22? <E , 2B0: ?<2< B2: =B B , ;B 2 H@ %, E , 2: 7 A 0 , =0 < ' ;AB 0;> , 0: O P 4
?@ B : CB , ' %<> 0 #HB BRB : DB B , 2: ; , , B0 ?< , =' < ' ;AB =' < F0: 7 <FF<0B0 22: P J: 4 : K 7 N< 0) 2<00B , ' 8< ;> 2: O ' 7 , ;$>00: , ?<: : P6 : P5 7 HB < B % B0 < ' < B0 . B= , 0: O 4: OO : O 7 B; B , ;0: OP : N OP5: O4 7 , ;' , ; , B : O4 : O4 6 ' <E , : * <?; < ' " : 2B , =B ' < ' M>B2?; B0: P: O : 5 6

, , EB= , : " , ? 0?<: , 2B AB , =' < ' ;AB C> ; , ' , ; BE 22B: O 7 B = B ' < ' ; AB 0; BDB ?@: 0 ' 7 =BF<0B=' H@ ; AB < ; B0: : , ;B < W: DB B , 2: A 0 <FB , Y ; < 0 < ' H< =B 0 < ' (, 2 ? , : ' 7 ?< , =0 1 , 00= , 80 , =E , ?B: 6 5 : O ' 7 22B=: OO 6
;66 @ : %, > B ;' (<>E <>: DB BY , 2: A 0 ?, F, D ' , ; , Y 2< , : O 47 0>FB 0B=B=: 4 7 , ;' (B < , : 7 A 0 E BU0 < ' ;AB 0 BDB: O 7 ; , B0 ?< , =: 7 D EB0 ;' <EB ' ;< DB B , >: 7 ? ; ? 0 ' < ' A 0 ?< =>?; : P 6
, ?ABR: C>2 , : D>B 22B <' ?A B : ' 7 ' >=, =' <= D<: O ' 7 B0?, FB0: O 7 H2<? , =B0 >=, =' <= D<: OO47 B =B 0 , =' ;< \ " B22 D; < : O5 6
, 0< : " B ?A B D BB ' DB B , 2: A 0 F2, 0 < ' 0 BDB < ' (B < , : 4 ' , ; , " B: 1 , , <: * > B < : F, 0A B E<@ , ;' + , 0: P 56
, ; , B : DB B , 2 #H2B , ; : -O O7 " B ?2 ' B; B , ;' < : O4 ' 7 0 60A , ; : O ' 6
, ;<? 2=B0: C<0B: =B B =0 0;< D , : P6
?AU , ;R: DB B , 2: =B B , ;B= , ;' 1 , B0 , : 5 ' 7 0> F 0B=' , =' ?, FY ;> B=' , ;' %, ' $ 0F , 2: O5 6
BH , 0; , : < , ?B: DB B , 2: , ;' ?< H , ;' < ' ; D<2 , : 57 =B B , ;0 ' B R , D , : 5 7 0>H=>B0 (, , =, ' , =' 1 , 2 , D , : 7 F2> =B 0 1 > ? , : 4 7 , ?ABO , D , 0; $2 , B: O 7 =B B , ;0 %< =' $2 , @ B@: P6
B , 0: DB B , 2: ?< , =0 F <E ?B < ' %B< : 4 : O 7 A 0 , ; ; B F; 0 ;<' ?, ; ?A' +< 2 B : O P6
BE 22B: ?< 0F , ? B0 : O 7 B ; , 2 KC> ; , ' , ; : O: P 7 , 2L , =< ?=' H@ B ; , 2 C>>; , : 5 7 BE<2>; < 0 : O 7 0> B =B 0 ;<' C , 0BFA: O 6 2EB , : " , ? 0?<: DB B , 2 ?< Y , =0 ; AB , 0 <0 1 < ; B0: 4P 47 ?, F; > B0 +>BH2 , ' =B B , H , : 4 ' 7 H2<? , =B0 2 B = , : 004: O : O 46 <H , 2: <FB , ; < 0 , <> =: O 0: O 56 OO : OO 6
<>A , : 62<0<FA: DB B , 2: A 0 , F 0> F 0B=' H@ 8 * < B22: ' ?AB? B=' H@ 8 * < B22: 5 =B B , ;0 8 * < B22 , ;' . ?A: 5 ' BN< 0 1 , ?=< , 2=: : 6
<>2; :) ?A<2 , 0: , 0A , 2: * > B' < ' * , 2 , ; , : 0>??BB=0 C<> = , >' , 0 ?A B ' < ' ; 2 B' 60; , ' ' F, : 4O: 7 =B B , ;0 B R , D , ' , ; ?, A , : 5 P' 7 A 0 F2, 0 < ?< M>B0; ' < ' =, 2>0 , : V ' 7 < ?B0 ; AB F, 600B0: ' 7 A 0 >2B ' =, 2>0 , : ' 7 <FB , 2 < 0 < : , D , 0; %, ' < , , : ' 7) , F<2B< 80 ?B 0> B' < : O 7 A 0 0B2 0A F<2 ?@: O 5: P P6
<>2; : + B B: DB B , 2: , ; % B0 < ' < B0 2 B= , 0: O 47 , ; ' , ; , B : O456
<>0 , : C<0B ; < <: K ; AB + ? F , 2: 8 B HB ' < ' +< ; >D>B0B BDB ?@: 2>B ?B' < ' A 0 , 2@: 5 7 A 0 M>, B20 U ; A' B22 D; < : O 4 <>0 , <20; B : +B= <: +< ; >D>B0B , H , 00 , =< : ; D>B0 < : , ; , = R: 5 : P 6
<>0 , ' <= D<: (%% <>=B' =B % ' A , B06
; BU , ; : 1 8 22 , : DB B , 2: ; , B0 $; 0A' ; <<F0 ; <' , = R: O ' 7 0>?Y ?BB=B=' H@ (, A , : 6
; >, ; : A , 2B0: , H , 00 , =< ' , ; % 0H< : B HB ' < ' +< ; >D>B0B BDB ?@: 5O P6
>?AB; : %<> 0 (, H B2: , 0A , 2: A 0 ?< M>B0; ' < ' , D< : O: ' 7 , ?ABO < ' . , 2B ? , : O 7 HB0 BDB0 , =' ?, F; > B0 %B = , : 5' 7 ; , B0 1 BM> B R , : 5 ' 7 HB < B' < ; <60 , : O5 ' 7 F>; 0 , <' ; <' 2 DA; : O5O 7 A 0 , ?; < : 6

, H< , = , : " , ? 0?<' (2: DB B , 2: ?, F; > B0 +>BH2 , ' =B' B , H , : 4 6 , , B0: H , ; ; 2B' < : U< ' H@ * B2' + , M>B: 44 56
B >B2: <FB , ; < 0 < ' >?AB; ' , <> =: : O6
< B <: 1 > <R: % HB , 2 =BF>; @ ' < ; B0: P 6

< B0 . B= , 0: % B0 < : ' 7 _B ' D;< ' B; B , ;0 < : 5 O ' 7 =B0? F; < ' < : O 5 6
< ;<0 , : >?AB;' HB < B: O5 ' 7 8 * < B22 , ;;B F;0 ;< , =: O56 ' 7 H2<? , =B < : O5P6
, ;:) ?A<2 , 0: ?<2< B2: , ; ; , ? 0 1 , 00B , 80 , ; 22B @; , : 6 6 : 6 6 6 7 <>;B=' H@' " B ?A' ?, E , 2 @' , ;' , =, <: 6 5 ' 7 0B RB0 < H , : O : O 6
B B =, 2: ?< H , ;' < : 6

. , 2B ? , : C<0B , <80 =< , ; < ' , ;: P 4' 7 >?AB;80 , H< ; EB' , ; ; , ? ' < : O 7 <FB , ; < 0 < ' ;AB' , @' < : (%%' , <: C<0B6
. , 2EB =B: ?< H6 , ;' < : 6 6
. , >DA , : A , 2B0: H 0 B 6 , 0 < ' ;AB' < ;B0: P 6
. B BD , 0: " , ? 0?<: DB B , 2: 2 Y ; , @' D<E? < ' < ' , = R: OP 4' 7 E ?B <@' < ' 1 B6W ?<: O56
. B = B : DB B , 2: 0; FB 0B=B0 ? 22?: ' 7 HB0 BDB0 (B < , : 5 O ' 7 ;A <U0 >F A 0 ?< , =: O5' 7 ? ; ? 0 ' < ' A 0 ?< =>?; ' < ' ;2 B' 60 BDB: PO6
. ?A: H , ; ;2B' < : 5 6
. ?; < : 2 , >=B' +B : , 0A , 2: * > B' < ' $B22> <: <FB , ; < 0 < : , D , 0; ' B R , D , : P 4' 7 ?< , =0 0; ' < F0 ' ?< M>B60; ' < ' =, Y 2>0 , : 6 ' 7 B?B EB0 0> B =B ' < ' BE 22B: O ' 7 , ?AB0 < ' , = R: O ' 7 HB0 BDB0 ; : 6
. D<=B; : , 0F , : DB B , 2: =B B , ;B=' ' ;AB' B , ' 1 < B , : 6
. 22 , ? , F , : DB B , 2: <FB , ; < 0 < : ' , D< : 2 : : : : P: : 5' 7 A , , 00B0 >?2 B; : ' 7 =B B , ;B=' , ;' 2EB ;<0 , ' , =' ">B ' 0 , ; , : 6
. 22 , , ? , : " B ?A' = EB ' <>;' < : 5 6
. 22 , D , ? , : ?< H , ;' < : : 6
.8 22 , ; ; B: ?<2< B2: BWFB= ; < ' < : 5P6
. 22 , ' . B2A , : H =DB' < : ;0 F< Y ; , ?B: : 57' =B0; <@B=' H@' , 2<0' =8#0F , , : O 6
. RB>: ' 1 , 00B , ' , ; : 6

1 , 22 , ??: ?<2< B2' 2BW6: H 0 ?A , DB' , ;' $>00 , ?<: 4 6
1 B22B02B@: 2 < 6' B @: 0; B ' , ;' , = R: 6
.8B22B0 ?@: ?A , =: 1 , M> 0: A 0 BD< ; , ; < 0 U ;A' ;AB' B ; , 2' C> ; , : 6 : P4 7' HB?< B0' A< B D ' B? B; @: P 6
& B22 D;< : ;A> : . 60?<> ;: A 0 =B , 2 D0' U ;A' ;AB' B ; , 2' C> ; , : : P : 4 ' 7 B; B , ;0 ;< +< ;>D , 2: 4 ' 7 A 0 F2 , ' < ' =B B ?B' < ' +< ;>D , 2: P4' 7 ?< ?B ; , ;B0' A 0 < ?B0' B , ' ;AB' < ; B : O 7 B >B0 ;< <EB' < U , =' ;< >=, =' <= D< ' O ' 7 ? ; ? 0 ' < ' , > ' > =: PP' 7 U , ;?AB0' 2 B =, : 4O ' 5 7' F BF , B0' ;< BB;' 1 , 00B , 6 06 ' 7 , ;' $>00 , ?<: 6 6 P ' 7 U 0 H , ; ;2B' < ' $>00 , ?<: 6 P 5' 7 B ; B , ; 0 ' < ' < B0' . B= , 0: 6 5 VT ' 7 M>, B20' U ;A' + ? F , 2' <>0 , : O 6 4' 7 = 0F<0B0' ; <<F0' , ;' "< B0' B= , 0: O6 5' 7) , F<2B< 80' B , 0' < : O6 4' 7 F> 0>B0' B; B , ; D' " B ?A: OI 4P7' 0; <F0' , ;' , ' ; B : O4P' 7 A 0' E BU0' < ' ;AB' < ;B0: 6
1 A ;B: $2 , ?<: % HB , 2' N<> , 2 0; : A 0' E BU0: 6 ' '% ' 2A6 6
& 20< : C<A : DB B , 2: <FB , ; < 0 < : ' < ' ;AB' " B ?A' B , : O456

/ B ; , : >?AB;80 2<; 22 , 0' ?, F ; > B=' H@' 0> DB ;0' , ;: ' 7 0 BDB' , ;B , 2' < ' < ;<0 , ' , ;: O6

3 , 2 , B , : ?< H , ;' < : 6
3 , @ , 0: C6: DB B , 2: ' ;AB' ?, , ' ?, F , D : 4: 5 : 5 6
3B , : "6: DB B , 2: <>;B=' H@' . ?; < : : 7' B; B0' ;< BE 22B: : 46
3BRB B: EB : 2 B' < : < ; B=' H@' ' & B22 D;< : 5 ' 7 1 , 00B , 80 <FB , ; < 0 < ' ;AB: O 6 6
3 R , = B: EB : < ; ?6 , ; < ' , 2< D: ' ;AB' % B0' `e 9 , N , 7B0' . B= , 0: O 6 T' 8

W < =6 + ;B=' , ;' ;AB' 26 , B =< ' + B00' H@

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